Installation Guide & Warranty

Model Numbers | H27H49S • H32H49S **Direct-View Presentation™ TVs**

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For Customer Support/Service, please call:

1-888-865-3026

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RECORD THE SERIAL NUMBER
The model-serial number of the Presentation™ TV is located on the back of the cabinet. For future reference, we suggest that you record those numbers here: MODEL NO.
SERIAL NO._____

WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

POWER CORD POLARIZATION:
This product is equipped with a 3-wire grounding-type alternating current line plug. This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the three-wire ground type plug.

NOTE TO CABLE/TV INSTALLER:
This reminder is provided to call the cable TV system installer's attention to Article 820-40 of the National Electric Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of the cable entry as practical.

REGULATORY INFORMATION:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION:
Do not attempt to modify this product in any way without written authorization from LG Electronics U.S.A., Inc. Unauthorized modification could void the user's authority to operate this product.

COMPLIANCE:
The responsible party for this product's compliance is: LG Electronics U.S.A., Inc.
1000 Sylvan Avenue, Englewood Cliffs, NJ 07632, USA • Phone: 1-201-816-2000.

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IMPORTANT SAFETY INSTRUCTIONS

Important safeguards for you and your new product

Your product has been manufactured and tested with your safety in mind. However, improper use can result in potential electrical shock or fire hazards. To avoid defeating the safeguards that have been built into your new product, please read and observe the following safety points when installing and using your new product, and save them for future reference.

Observing the simple precautions discussed in this operating guide can help you get many years of enjoyment and safe operation that are built into your new product.

1. Read Instructions

All the safety and operating instructions should be read before the product is operated.

2. Follow Instructions

All operating and use instructions should be followed.

3. Retain Instructions

The safety and operating instructions should be retained for future reference.

4. Heed Warnings

All warnings on the product and in the operating instructions should be adhered to.

5. Cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

6. Water and Moisture

Do not use this product near water for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.

7. Accessories, Carts, and Stands

PORTABLE CART WARNING

Do not place this product on a slippery or tilted surface, or on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

8. Transporting Product

A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

9. Attachments

Do not use attachments not recommended by the product manufacturer as they may cause hazards.

10. Ventilation

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

11. Power Sources

This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

12. Power Cord Polarization

This product is equipped with a 3-wire grounding type alternating-current power plug. This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the three-wire ground-type plug.

13. Power Cord Protection

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

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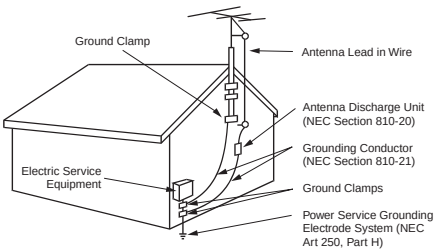
IMPORTANT SAFETY INSTRUCTIONS

(Continued from previous page)

14. Outdoor Antenna Grounding

NEC - National Electrical Code


Ground Clamp
Antenna Lead in Wire
Antenna Discharge Unit (NEC Section 810-20)
Grounding Conductor (NEC Section 810-21)
Electric Service Equipment
Ground Clamps
Power Service Grounding Electrode System (NEC Art 250, Part H)

If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code (U.S.A.), ANSI/ NFPA 70 provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

15. Lightning

For added protection for this product (receiver) during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

16. Power Lines

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

17. Overloading

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

18. Object and Liquid Entry

Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

19. Servicing

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

20. Damage Requiring Service

Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a. If the power-supply cord or plug is damaged.

b. If liquid has been spilled, or objects have fallen into the product.

c. If the product has been exposed to rain or water.

d. If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.

e. If the product has been dropped or the cabinet has been damaged.

f. If the product exhibits a distinct change in performance.

21. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

22. Safety Check

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

23. Wall or Ceiling Mounting

The product should be mounted to a wall or ceiling only as recommended by the manufacturer. The product may slide or fall, causing serious injury to a child or adult, and serious damage to the product.

24. Heat

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat. Never place any hot objects on the cabinet surfaces. Contact with hot objects is sure to result in damage to the product.

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Table of Contents

Use this page as a reference for finding the pages or sections to go to and set up the TV's features for the end user

See the Setup Checklist on page 6

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Purchase the Optional LT2002 Quickset Clone Programmer

To perform a normal installation, you need to use the remote supplied with the TV and the LT2002 Quickset II Clone Programmer—both are shown and described in later sections. The remote allows access to both the Installer and User menus. The LT2002 Quickset II Clone Programmer is used to duplicate a Zenith TV's setup and install it on another identical Zenith TV. See your Zenith/LG Dealer.

Note: Design and specifications are subject to change without prior notice.

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Setup Checklist

Following are the steps necessary to install and set up the TV

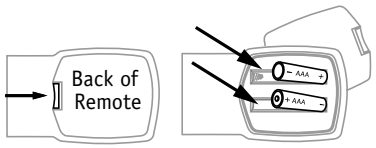
Setup and Operation Checklist

1. Unpack the TV and all accessories.

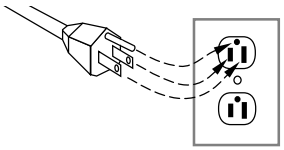
2. Connect the TV to antenna and all external video source equipment.

See pages 15 - 23.

3. Install batteries in remote control.



4. Plug TV and source equipment into standard 120V 60Hz power outlets.



5. Turn TV On.

See pages 24 - 25.

6. Choose on screen menu language. (English is default.)

See page 39.

Reception Setup and Channel Search

8. Use Auto Prg.* (Program) to search for all channels in your area.

See page 26.

7. Select viewing source for TV.

See page 28.

8. Adjust Installer menu items per requirements.

See pages 47 through 55.

Customize the TVs Features for the End User

9. Fine-tune source image and sound to personal preference or as required by source.

See pages 40 through 42.

Additional Features Setup

See page 5, Table of Contents.

- To connect a PC computer to the TV see the following pages.

See page 7.

- Program remote to operate other devices. If necessary, program the remote control to operate the other devices in your system.

See page 60.

- Create a Master TV and clone the setup, copy setup to identical TVs.

See pages 5 and 56 - 59.

*Auto Prg. (Program) finds channels which have a signal present and are actively being broadcast. Some broadcasters do not provide or broadcast a signal continuously. As a result, some DTV channels may not be found in the channel scan. If you know that there is a DTV channel that was not found by Auto Program, run Auto Program again; when the DTV channel is actually sending out a program signal.

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Computer Setup

Read the following overview/instructions to set up and use the Presentation TV as a Computer Monitor

Using Your Presentation TV as a Computer Monitor (pages 7 - 14)

Caution: When planning your computer monitor setup, be sure to provide adequate support for the connector/cable that will be used to hook up your computer to this TV. If not properly supported, excessive weight from the cable can damage the TV connectors. Be sure that the weight of all cable connections made to this TV are properly supported.

Connect a Computer to the TV using the cable provided in the accessory packet supplied with the TV, follow the hookup instructions on pages 8 and 9.

PC
You can make a direct hookup to the TV's front or rear computer connectors without using any adapters.

MAC
Macintosh computers may require a Zenith PCZ40 adapter (typical DB-15 adapter which connects the Macintosh 2-row connector to the TV's 3-row connector) see your Zenith/LG dealer or computer reseller.

Video Mirror Connections (Optional)
The computer image can be sent to both the TV screen and a computer monitor at the same time by using the video mirror connection, see the instructions on pages 8 - 9.

PC
Direct connection to the TV's connectors using the cable provided in the accessory packet.

MAC
Macintosh computers may require a Zenith PCZ40 adapter (typical DB-15 adapter which connects the Macintosh 2-row connector to the TV's 3-row connector) see your Zenith dealer or computer reseller.

Adjust the Computer Display Output to TV Requirements
Computer display output settings must be set to SVGA 800 x 600 @ 60 Hz.

Set Up the Presentation TV for Computer Requirements
If your Computer is hooked up to the TV's front computer port which is 800 x 600 @60 Hz, choose FRONT COMPUTER SVGA input by pressing TV/VCR SOURCE repeatedly on the remote control, or use the on-screen Source menu.

If your Computer is hooked up to the TV's rear computer port, choose REAR COMPUTER SVGA input by pressing TV/VCR SOURCE repeatedly on the remote control, or use the on-screen Source menu.

Additional Computer Image Enhancements (Optional)
Additional computer output adjustments to optimize the computer image quality appearing on the TV screen

PC See page 10 for Windows environment.

MAC See page 11 for Macintosh environment.

Troubleshooting
Problems? See troubleshooting on page 13 for Computer/TV setup problems.

Notes
- Avoid using hookup cables of excessive length (longer than 25 feet). Long cables can adversely affect image quality and Computer/TV performance.
- Not all computer cables will work with the TV. See your Zenith/LG dealer for special computer extension cables.

Note: The optional PCZ3100 Computer Scan Conversion Card Kit is available from your Zenith dealer. The PCZ3100 allows the TV to display additional computer formats in addition to 800 x 600 @60 Hz SVGA. It also enhances the image from your computer, and allows you to link or daisy-chain a series of TV sets; allows a computer's image to appear on a series of TVs connected to the TV.
See your Zenith/LG dealer for further details.

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Computer Hookup

Read the following overview/instructions to set up and use the Presentation TV as a Computer Monitor

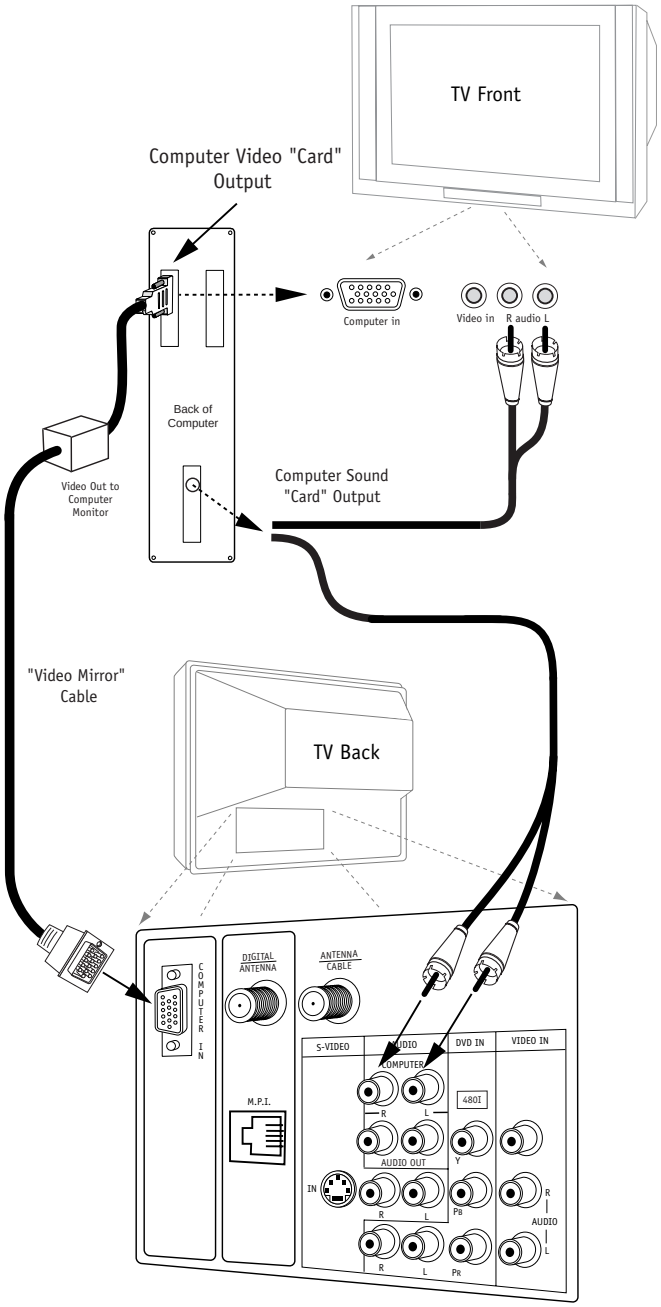
1. Make the basic connections as indicated. (Appearance of components may vary from those in the illustrations.)

2. Set the computer's image output settings to 800 x 600 @ 60Hz or SVGA.

3. On the Source menu, highlight "REAR COMPUTER SVGA" (Rear Computer in) then press ENTER on the remote to change to the computer image source. Or plug the computer connector into "Computer In" on the TV front panel. (Note: Item 41-I Auto Compport must be set to 1 in the installer menu.)

4. Boot up your computer. As it warms up, the TV will adapt to your computer.

   Note: Unlike a computer monitor, this TV does not show a computer image on the screen until the TV has completely adapted to your computer's output. This is normal when using this TV as a computer monitor. When the TV has completely adapted to your computer, the computer's image will appear on the screen.



Connections to TV front or rear computer port, with computer sound card output to front or rear R - audio - L inputs.

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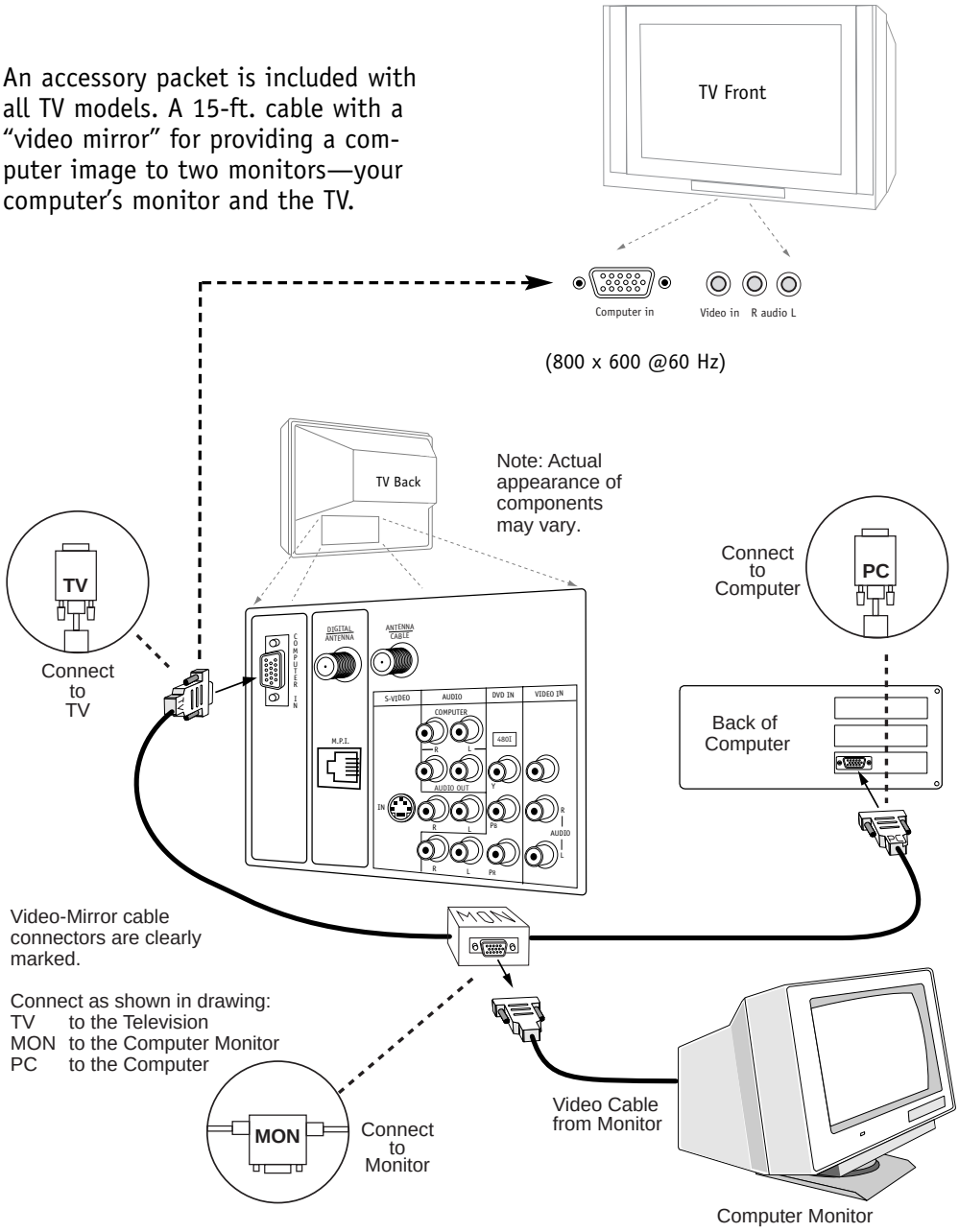
Computer Hookup

Make the connections with the 15-ft. "Video-Mirror" cable exactly as shown. Also refer to the preceding page for audio connections and "Using the monitor function."

An accessory packet is included with all TV models. A 15-ft. cable with a "video mirror" for providing a computer image to two monitors—your computer's monitor and the TV.



Notes

- Your TV must be plugged in—not necessarily turned On—for the computer monitor to function.
- Unless the Mirror Cable is connected exactly as shown above, no computer image will appear on the TV.

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Setting up your computer for optimum picture output in the Windows operating system environment

WINDOWS Environment

The following is a step-by-step procedure for setting your computer's picture output to optimum display quality.

1. Plug in your computer to the Presentation TV. Turn on the TV and then the COMPUTER.

2. Open your CONTROL PANEL and click on DISPLAY PROPERTIES.

3. Click on APPEARANCE. This is where you will make changes for Presentation display.

At this time you will now CREATE a NEW SCHEME or display for Presentation Display. Once you have created this "new scheme" you'll be able to quickly switch between Normal and a Presentation display Scheme. Once you have made the changes to your computer Scheme, then SAVE AS a Classroom Display. Use the following steps to change each ITEM, FONT and COLOR for optimum computer image viewing on the TV screen.

1. Select under the ITEM and start with ACTIVE TITLE BAR.
   * Select SIZE to 28
   * Select COLOR to GREY
   * Select FONT
   * Select TIMES NEW ROMAN
   * Select SIZE 18
   * Select COLOR of BLACK

2. Select under the ITEM category CAPTION BUTTONS
   * Select SIZE of 25

3. Select under the ITEM category ICON
   * Select SIZE of 40
   * Select FONT SIZE of 20
   * Select FONT of TIMES NEW ROMAN (BOLD)

   Technical Update: Optimum Display, November 1998

4. Select under the ITEM category ICON SPACING (Horizontal)
   * Select SIZE of 100

5. Select under the ITEM category ICON SPACING (Vertical)
   * Select SIZE of 100

6. Select under the ITEM category INACTIVE TITLE BAR
   * Select SIZE of 30
   * Select FONT SIZE of 18
   * Select FONT of TIMES NEW ROMAN

7. Select under the ITEM category MENU
   * Select SIZE of 30
   * Select FONT SIZE 18
   * Select FONT of TIMES NEW ROMAN

8. Select under the ITEM category MESSAGE BOX
   * Select FONT SIZE of 14
   * Select FONT of TIMES NEW ROMAN

9. Select under the ITEM category PALETTE TITLE
   * Select SIZE of 30
   * Select FONT SIZE of 18
   * Select FONT of TIMES NEW ROMAN

10. Select under the ITEM category SELECTED ITEMS
    * Select SIZE of 30
    * Select COLOR of BLUE
    * Select FONT SIZE of 18
    * Select FONT of TIMES NEW ROMAN

11. Rename the scheme and SAVE AS, PRESENTATION DISPLAY.

12. CHANGING THE APPLICATION ICON SIZE
    * Select Excel (Spreadsheet/workbooks)
    * From the TASK BAR select TOOLS
    * Select CUSTOMIZE
    * Select OPTIONS
    * Click on LARGE ICONS

Your Icons within your WORD and EXCEL will now match your new Scheme display.
Now you have set your Windows computer for optimum Presentation Display.

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Setting your computer for optimum picture output in the Macintosh operating system environment

MACINTOSH Environment

The following is a step-by-step procedure for setting your computer picture output to optimum display quality.

1. Plug your computer in to the Presentation TV. Turn on the TV and then the COMPUTER.

2. Open your CONTROL PANEL by choosing under the APPLE icon or by clicking on your HARD DRIVE icon. If you choose the HARD DRIVE icon, you'll have to open your CONTROL PANEL through the SYSTEMS FOLDER.

3. Once you have located the CONTROL PANEL, click on VIEWS. This is where you will make changes for Presentation display.

4. Change the FONT to one that is appears well on a television. We would suggest that you use TIMES BOLD. Now, change the FONT SIZE to 18 or better.

   Each time that you use the TV with your computer, you will simply change the FONT and SIZE through the CONTROL PANEL and VIEW. You have now changed the appearance of all your folders but NOT your applications.

VIEWING FOR PRESENTATION vs. PRIVATE

1. When viewing an application, such as EXCEL or WORD, you will have to change the appearance of each application.

2. Once the application has been opened, just change the view from 100 percent to a selection over 150 percent. This will not permanently effect your document. Once you have completed your presentation, simply reduce the size back down to 100 percent viewing ratio.

3. To enlarge the ICONS of the application, click on VIEW and then select TOOLBARS. Slide down and highlight CUSTOMIZE with your mouse, then click.

4. A file folder will now "pop-up". Now selection OPTIONS and then click on LARGE ICONS. This will only enlarge the ICONS on your menu palette. Due to a less flexible platform, you will not be able to effect the fonts/size on the Menu Bar.

This Zenith TV is a high quality, low cost alternative to a true SVGA monitor.

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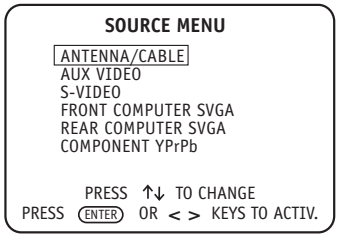
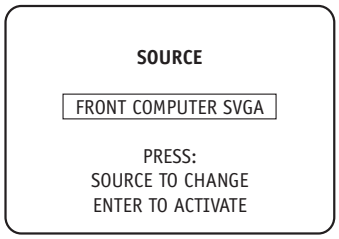
Computer Source Selection

Choosing the computer input on the Source menus



Selecting Viewing Sources Using the Onscreen Menus



Selecting Viewing Sources Pressing TV/VCR Source Key on Remote

Source Selection Using Remote Control

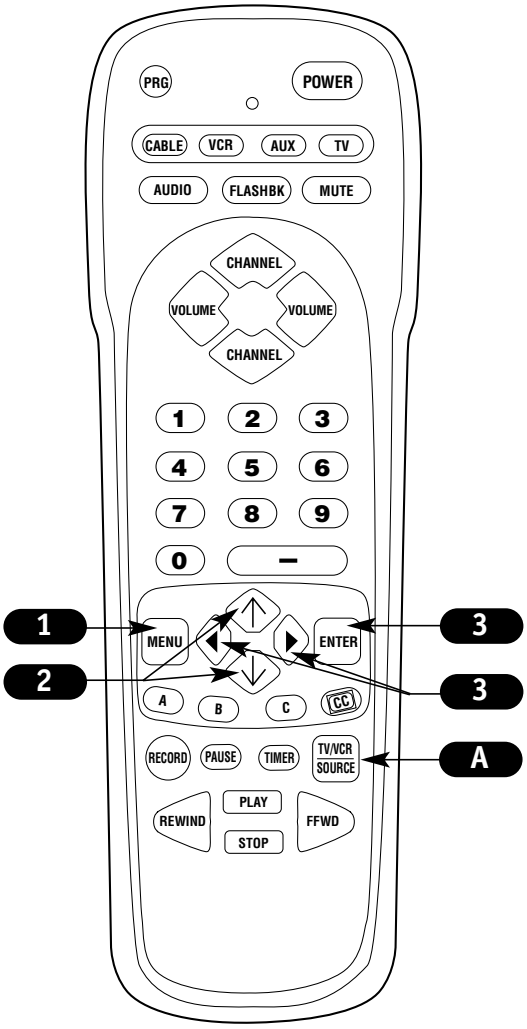
A Press TV/VCR SOURCE repeatedly on the remote to cycle through the available sources.

Source Selection Using Source Menu

1 Press MENU repeatedly on the remote until the Source menu appears.

2 Use the Up/Down arrow on the remote control, to select the computer source that you want to appear on your screen.

3 Press Enter, or the Left/Right arrow on the remote, to change to the new source. Press ENTER again to remove menu.



The front Computer In connector is an Auto Sense input. If you connect a computer to this connector, it will override any other selected source and show the computer display on the screen.

If the source you want to select does not appear as an option on the Source menu, it may be set up as a Auto Sense input. Sources that are specified as Auto Sense inputs will not appear on the Source menu.

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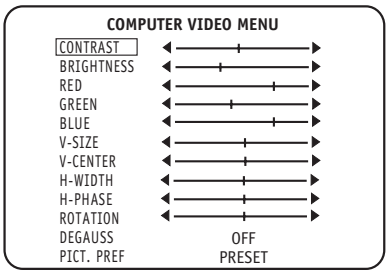
Computer Video Menu

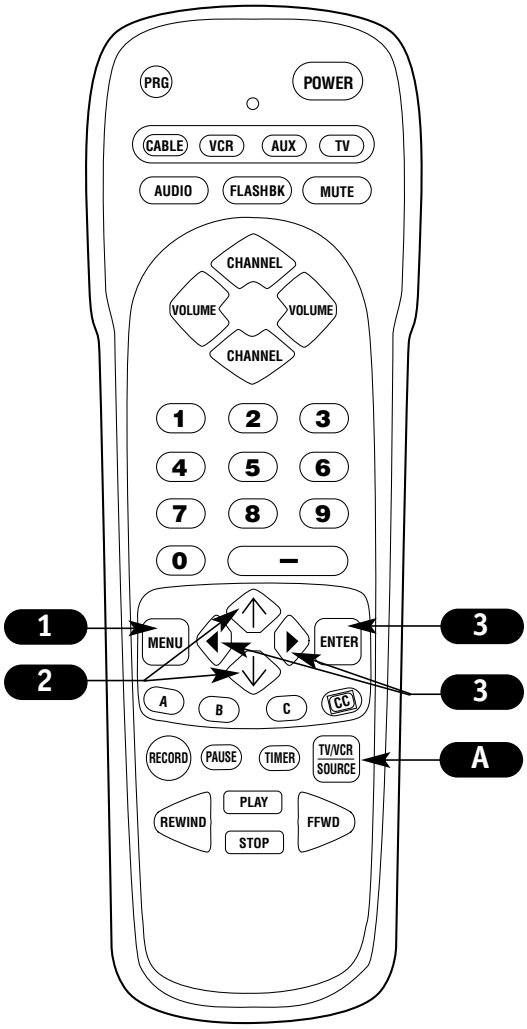
Use the Computer Video Menu for computer sources and customize the picture's appearance



To display the Computer Video Menu, connect and select a computer source.

1. Press the MENU key and repeat to select the Video menu. Available options are:
   - **Contrast**: Adjusts the level of difference between white and black in the picture. The more contrast, the brighter the picture appears.
   - **Brightness**: Increases or decreases amount of white in the picture.
   - **Red/Green/Blue**: Adjusts level of color in the picture.
   - **V-SIZE**: Adjusts the vertical size of picture.
   - **V-CENTER**: Adjusts the vertical position of picture.
   - **H-WIDTH**: Adjusts the horizontal size of picture.
   - **H-PHASE**: Adjusts the horizontal position of picture.
   - **ROTATION**: Rotates the picture.
   - **DEGAUSS**: Degausses the screen.
   - **Picture Preference**: Choose either Custom or Preset. Custom allows you to set the picture the way you want. Preset moves all the above options back to their original, factory-set levels.
2. Using the Up/Down arrow on the remote control, choose Contrast on the menu.
3. Using the Left/Right arrow, change the contrast level as preferred.
4. Press ENTER to remove menu, or repeat from Step 2, to select and alter settings for the other menu options.
5. Use the Up/Down arrow to choose the Picture Preference option.
6. Use the Left/Right arrow, to choose either the original settings with 'Preset', or altered settings with 'Custom'.

Choose the Preset option in Picture Preference to quickly reset the video menu settings to their original default values.



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Computer Setup Troubleshooting

Some quick and easy tips to resolving problems when using the Presentation TV as a Computer Monitor

Symptoms	Possible Cause(s)	Probable Solution(s)	See Page(s)
Computer Image			
Poor or no computer picture.	• Poor Connections.	-Check all cable connections.	8
	• TV/Computer not turned on.	-Turn TV/Computer on.	
	• Wrong TV source selected.	-Select the proper TV source the computer is connected to.	12
	• 800 x 600 @60 HZ not set.	-On the Computer, set display output to 800 x 600 @60 Hz.	9
	• TV not adjusted to computer.	-Wait until TV adjusts to computer image.	9
	• Cable over 25 feet.	-Set up Computer/TV where an excessively long cable is not required.	
Local interference.	• Check for disturbing source.	*The following may cause image problems or distortion:* *Electrical appliances, powerful lights, cars, trucks; computers or portable phones; medical equipment.*	
	• Appliance too close to TV or computer.	-If possible increase the distance between your TV, computer, and the offending appliance. Or turn one of them off.	
Fuzzy computer picture.	• 800 x 600 @60 HZ not set.	-On the computer, set display output to 800 x 600 @60 Hz.	9
Poor computer picture.	• Computer display output is not optimized.	-See page 13 for instructions to optimize computer's image.	

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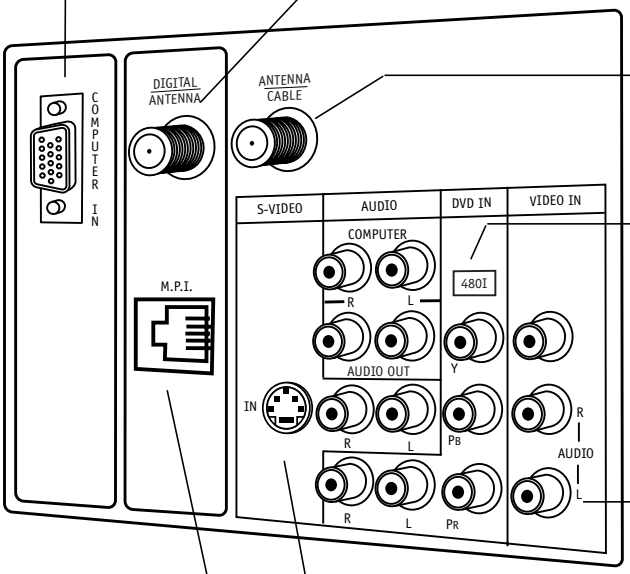
TV Connections Overview

A brief overview of the connections available on this TV

Use this page for reference when connecting analog or digital signal sources and other source equipment. To hook up source equipment, refer to the next page; shows pages to go to for equipment hookup options. Also, see the front connection panel hookup options on page 24.
Notes:
• Digital cable is not available on this TV.
• If only one wire provides the signal source, use a standard 2-way signal splitter and connect it to both the Antenna-Cable and Digital Antenna RF jacks on the TV, see below.

REAR COMPUTER SVGA
Rear Computer input port. Connect your PC to this port to show your computer video output on the TV screen. See page 9.



Digital Antenna
Connect if digital signal source is available.
Note: If both digital and analog signals are only available from one RF lead, connect a signal splitter (not provided).
See page 16.

Antenna/Cable
Connect analog off air antenna or analog CATV signal source here. See page 16.

DVD In
Component Video Inputs
Connect component video equipment or a DVD player here.
• DVD Player 480i
• Set Top Box 480i
See page 21.

Video In R-Audio-L
Connect composite Video-Audio source here.
See page 22.

S-Video In R-Audio-L
Connect S-Video-Audio source here. See page 20.

MPI Port
Connect LT2002 clone programmer to MPI port. See page 56.

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Hook Up an Off Air Antenna

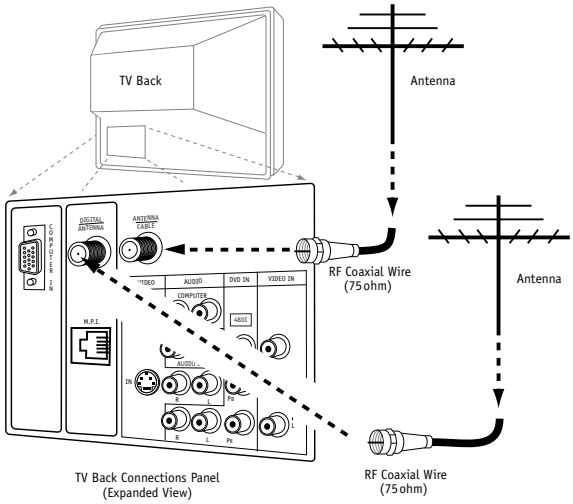
Connect an over the air signal source to the TV

Over the Air Antenna

1. Locate the Antenna/Cable jack on the back of the TV.
2. Connect the antenna that runs from the wall directly to this jack, according to the connection diagram shown to the right.

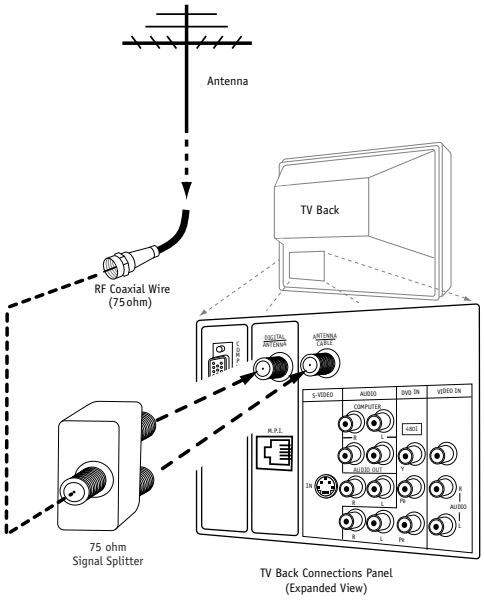
If you have a 75 ohm RF cable, then you don't need any adapters!

A 300 to 75 ohm adapter is not included with the LG TV.



To get digital with only one RF antenna lead, install a signal splitter

1. If there is only one antenna lead available from the wall antenna jack, locate the Antenna/Cable and the Digital Antenna jacks on the back of the TV.
2. Connect the antenna that runs from the wall directly to a 75 ohm 2-way signal splitter (not provided) according to the connection diagram shown to the right.
3. Connect the two antenna leads to the TV RF inputs: Antenna/Cable and Digital Antenna. This will provide the same over the air signal to both the analog and digital RF inputs.



Mini Glossary

2-Way Splitter	A device that provides two antenna signals from one antenna lead.
75 ohm RF Cable	The wire that comes from an off-air antenna or cable service provider. Each end looks like a hex shaped nut with a wire sticking through the middle, and it screws onto the threaded jack on the back of the TV.
300 to 75 ohm Adapter	(Not shown) A small device that connects a flat two-wire 300 ohm antenna to a 75 ohm RF jack. They are usually about an inch long with two screws on one end and a round opening with a wire sticking out on the other end.

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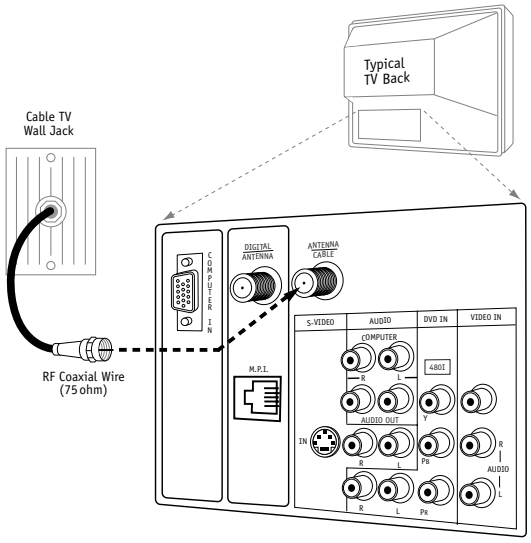
Hook Up Cable Service (CATV)

Connect cable service to the TV

Cable Service

1. Locate the Antenna/Cable in jack on the back of the TV set.
2. Connect the CATV cable that runs from the wall according to the connection diagram shown to the right.

☹ The TV digital tuner does not work with a Digital Cable signal source.



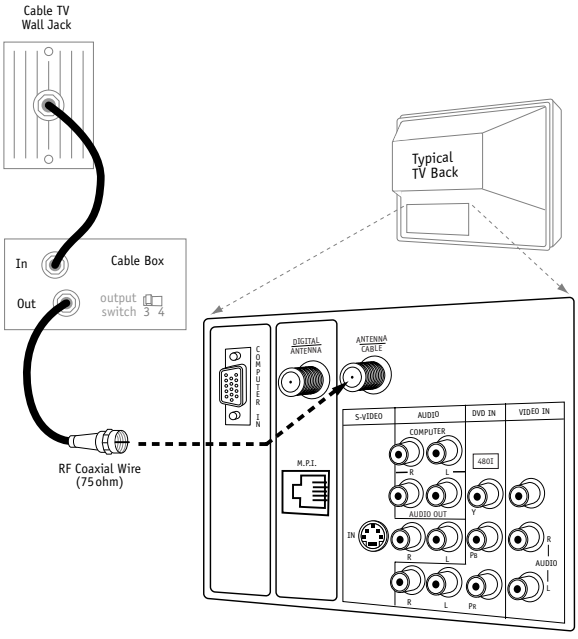
Cable Service with a Cable Box

1. Locate the Antenna/Cable in jack on the back of the TV set.
2. Connect the CATV cable that runs from the wall to the cable box and TV according to the connection diagram shown to the right.

☺ If you're using a cable box, tune the TV to channel 3 or 4 and use your cable box to change channels.

☹ If you're using a cable box, Auto Program might only find the channel your cable service is on (usually channel 3 or 4).

☹ The TV digital tuner does not work with a Digital Cable signal source.



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Hook Up an Off Air Antenna with VCR

Connect an over the air signal source to the VCR and TV

Over the Air Antenna with VCR

1. Locate the Antenna/Cable In jack on the back of the VCR.

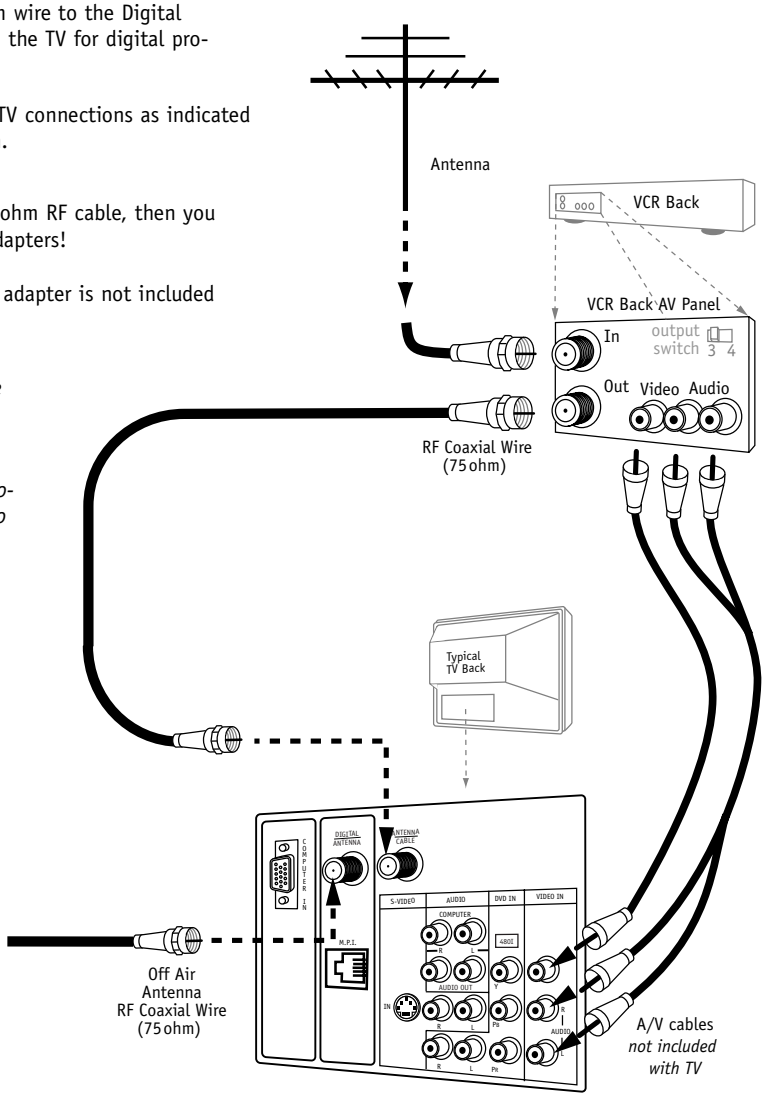
2. Connect the antenna that runs from the wall jack directly to this jack, according to the connection diagram shown to the right. Connect a 75 ohm wire to the Digital Antenna input on the TV for digital programming.

3. Make the VCR to TV connections as indicated in the illustration.

If you have a 75 ohm RF cable, then you don't need any adapters!

A 300 to 75 ohm adapter is not included with the LG TV.

No A/V cables are included with the TV. Without A/V cables, most VCRs will not play videocassettes in stereo sound.



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Hook Up a Cable Box with VCR

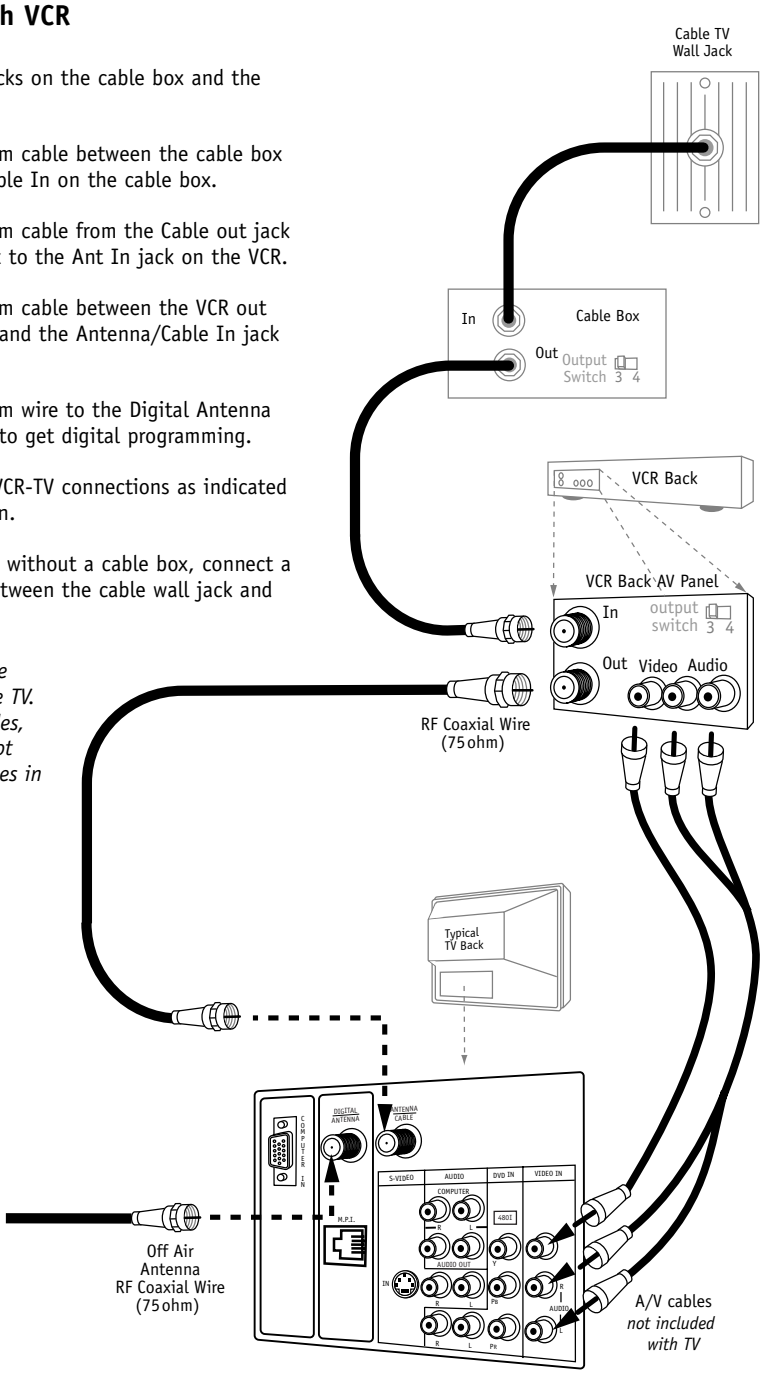
Connect a cable box and VCR to the TV

Cable Service with VCR

1. Locate the In jacks on the cable box and the VCR.
2. Connect a 75 ohm cable between the cable box wall jack and Cable In on the cable box.
3. Connect a 75 ohm cable from the Cable out jack on the cable box to the Ant In jack on the VCR.
4. Connect a 75 ohm cable between the VCR out jack on the VCR and the Antenna/Cable In jack on the TV.
5. Connect a 75 ohm wire to the Digital Antenna input on the TV to get digital programming.
6. Make the other VCR-TV connections as indicated in the illustration.

For cable service without a cable box, connect a 75 ohm cable between the cable wall jack and the VCR In jack.

No A/V cables are included with the TV. Without A/V cables, most VCRs will not play videocassettes in stereo sound.



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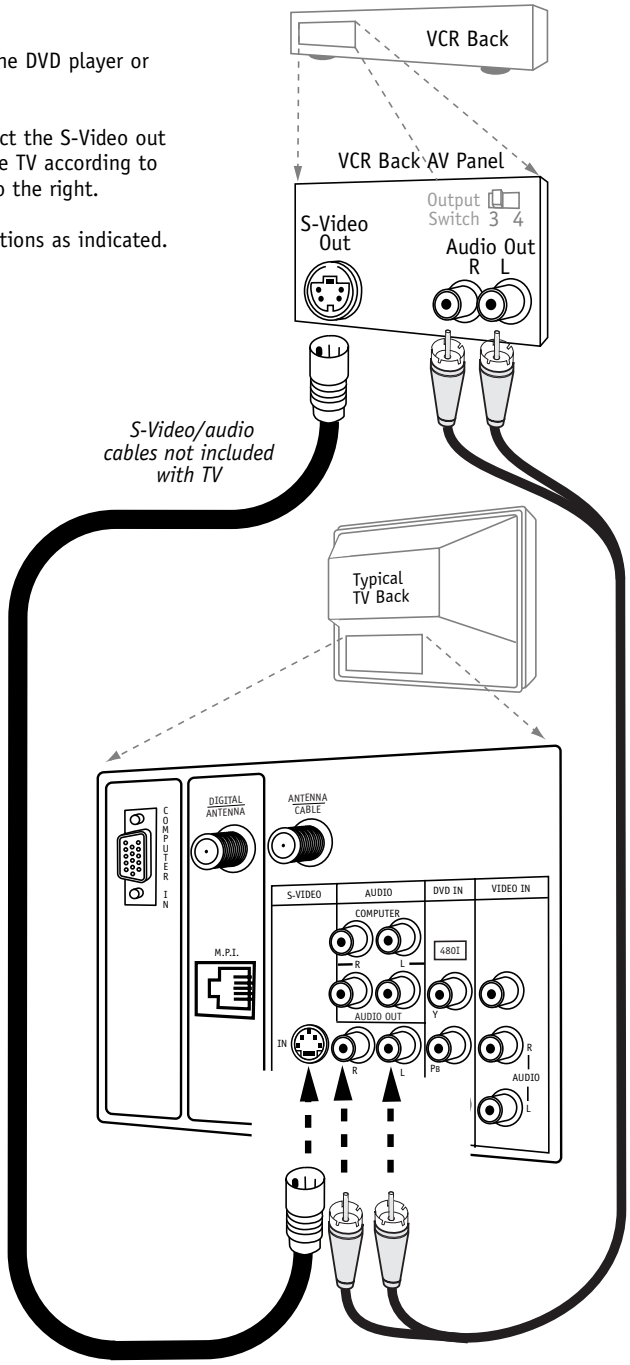
Hook Up S-Video DVD Player or VCR

Connect an S-Video source to the TV

S-Video DVD Player or VCR

1. Locate the S-Video out jack on the DVD player or VCR.
2. On the DVD player or VCR, connect the S-Video out jack to the S-Video in jack on the TV according to the connection diagram shown to the right.
3. Make the right/left audio connections as indicated.



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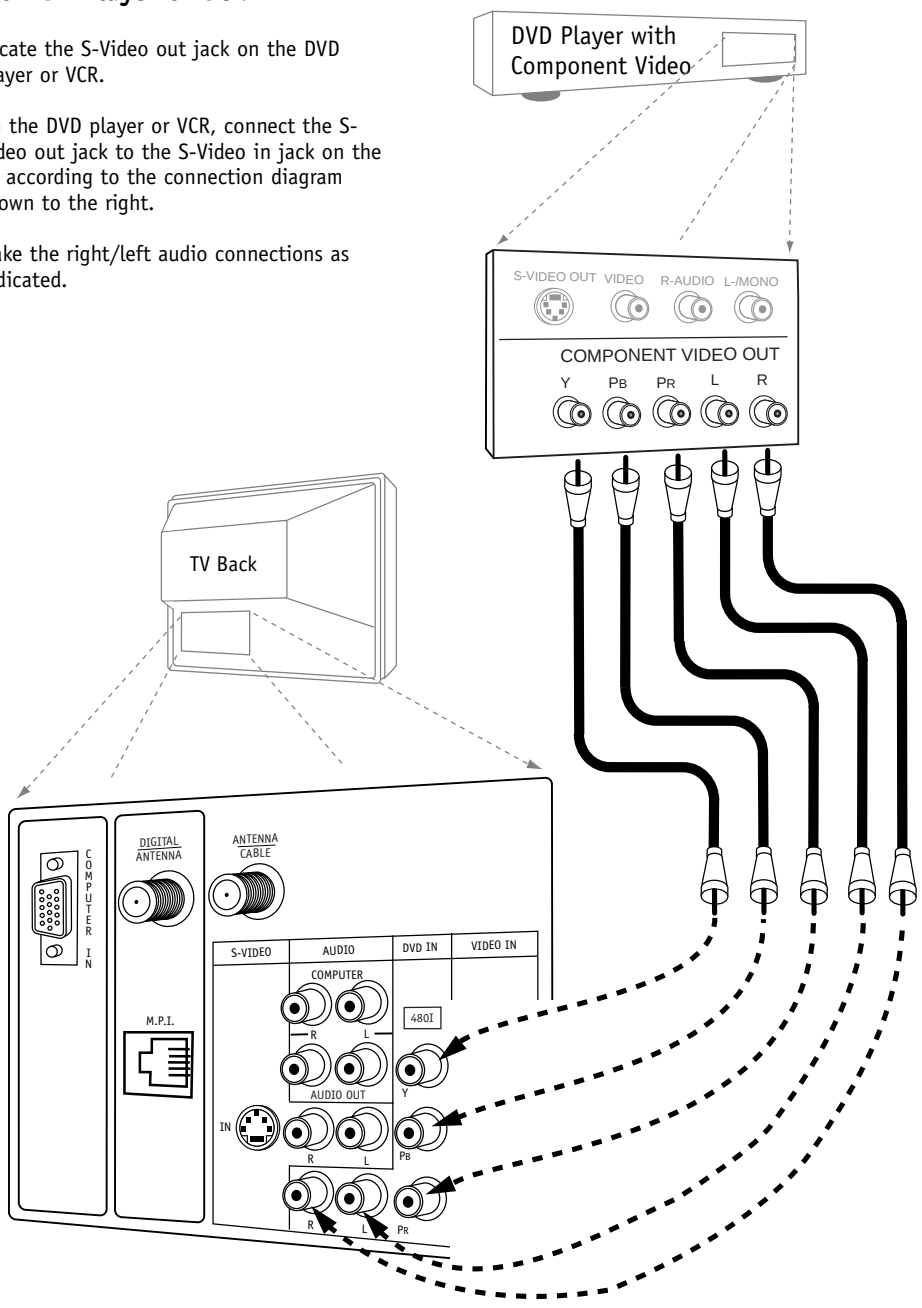
Hook Up DVD Component Video

Connect an S-Video source to the TV

S-Video DVD Player or VCR

1. Locate the S-Video out jack on the DVD player or VCR.
2. On the DVD player or VCR, connect the S-Video out jack to the S-Video in jack on the TV according to the connection diagram shown to the right.
3. Make the right/left audio connections as indicated.



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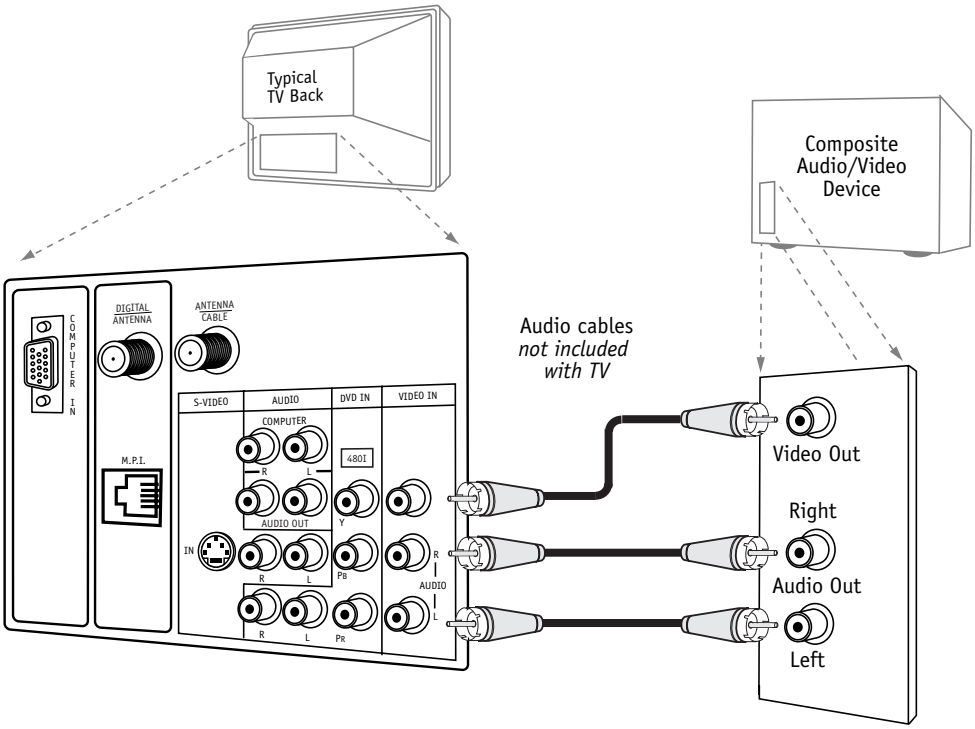
Hook Up Composite Audio/Video

Connect the TV to a composite audio/video source

Composite Audio/Video

1. Locate the composite audio/video input jacks on the TV.
2. Connect the composite audio/video input jacks to a composite audio/video device as shown in the illustration.



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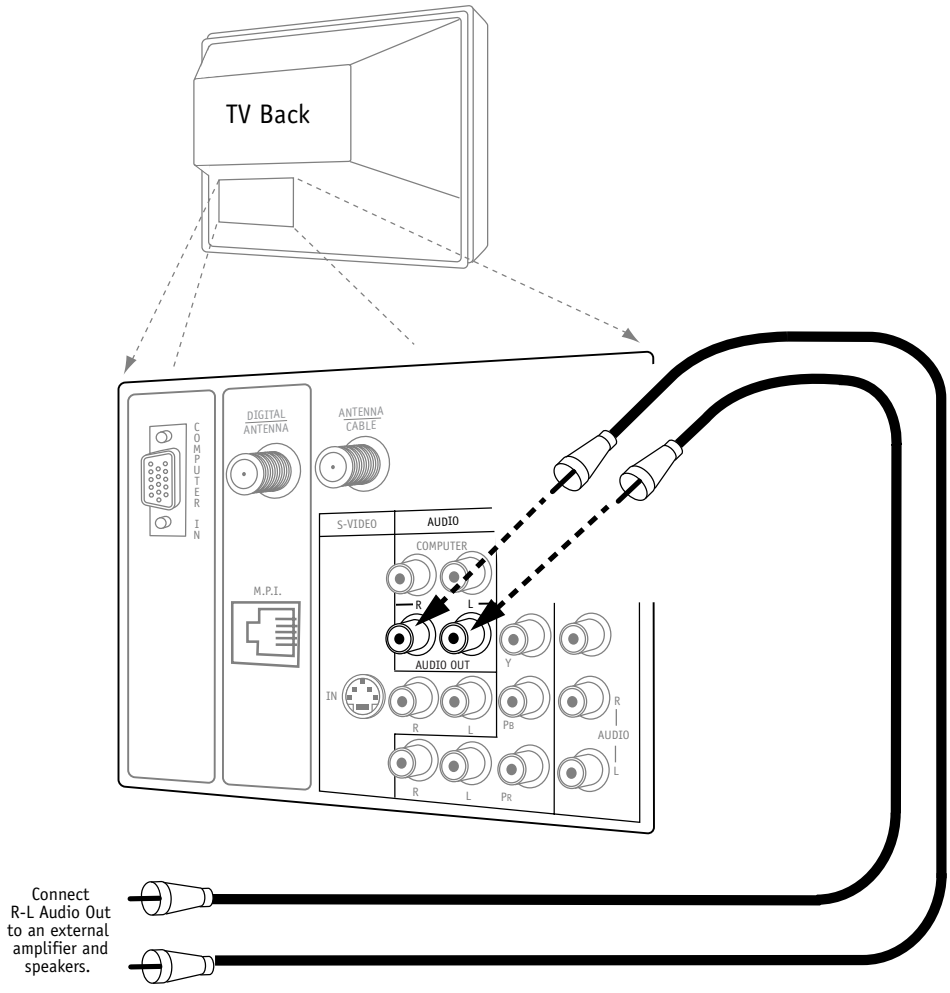
Hook Up an External Speaker

Connect the TV to an external speaker or amplifier

External Speaker

1. Locate the Matrix Out jack on the back of the TV.
2. Connect the Matrix Out jack to an external speaker or audio amplifier as indicated in the illustration.



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Front Panel Controls / Source Inputs

Using the front panel controls to operate the TV

A **Power**
Turns TV on and off.

B **CC (Captions/Text)**
Turns selected caption/text option On and Off.

C **Menu**
Displays on screen menus.

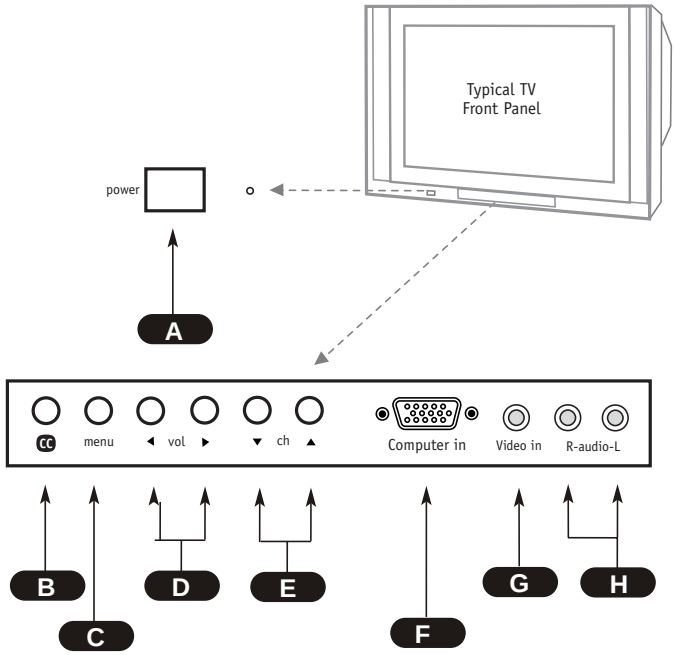
D **Vol - Adjust (Left/Right)**
Decreases/increases sound level.
Changes menu options.

E Ch **- Down/Up)**
Chooses next available channel.
Selects menu options.

F **Front Computer Input Port Connect portable PC here.**

G **Video (In) Camport**
Input for a video signal from auxiliary equipment.

H **L - Audio - R (In)**
Left/Right Channel audio input jacks.



The front Video jack is an Auto Sense source connection. With a cable connected, the TV will automatically change its source setting to CAMPORT.

If you have a device connected to the front Video jack and the Auto sense source connection is turned on, you will not be able to change channels using the TV tuner until you have disconnected the device.

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Remote Control

Keys descriptions and their functions for the Remote Control

PRG (Program)
Programs remote codes.

MODE Keys
Select remote operating modes.

AUDIO
Selects available digital channel audio languages.

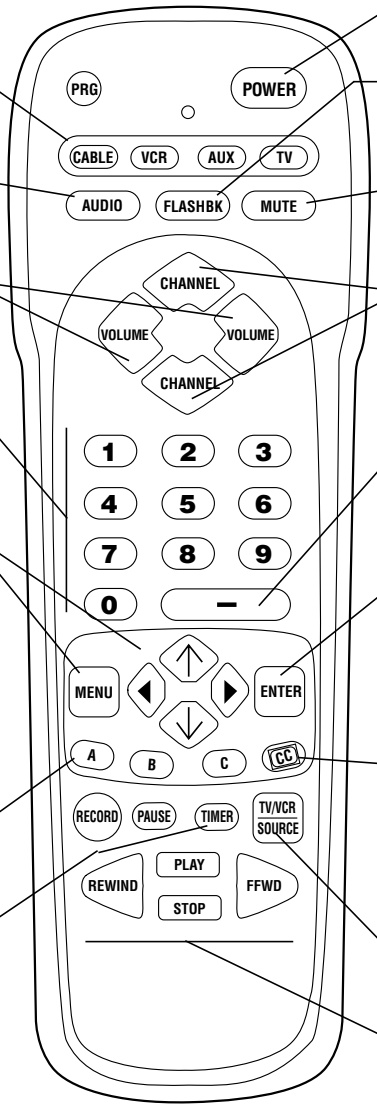
VOLUME Down/Up
Adjusts the sound level.

Number Keypad
Select channels directly; key in channel numbers and press ENTER.

MENU/SELECT (Up/Down) /ADJ (Adjust Left/Right)
Selects and adjusts on-screen menu options. Press MENU repeatedly to scroll through menus. Use SELECT to choose options and ADJ (Adjust) Left/Right to change the selected option.

A-B-C
Operating special features on some TVs.

(SLEEP) TIMER
Press repeatedly to choose a TV turn-off time up to 4-hours. Use to set AM/PM on the Alarm and On/Off Timer menus.



POWER
Turns TV On or Off.

FLASHBK (FLASHBACK)
Returns to the previously tuned channel.

MUTE
Turns sound Off and On, while the picture remains.

CHANNEL (Up/Down)
Scroll available channels, (analog to digital) and the Aux Channel (Audio/Video source).

-DASH (-)
For entering digital channel numbers e.g. 7-1, 11-3 etc.

ENTER
Press to view the Channel/Time/Audio display or to remove any on-screen display or menu.

CC (Closed Captions)
Press to turn closed captions On/Off. Press ENTER to remove menu. In digital captions, selects next caption language.

TV-VCR / Source
Select sources for viewing.

VCR Function Keys
Operate functions on some VCRs.

Remote Control part number
6710V00108M

Audio Languages: Availability of audio languages are determined only by each broadcaster and may not be available on all digital programs.

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Auto Program (Channel Search)

Use Auto Program to specify Antenna or cable service incoming signal source and automatically store all of the channels found by the channel search

1. With the remote control in hand, press the POWER key to turn on the Presentation TV.
2. Press MENU repeatedly until the Setup menu appears.
3. Using either the Up or Down arrow on the remote control, highlight AUTO PRG. on the menu.
4. Press the Right or Left arrow to go to the Auto Program menu.
5. Using either the Up or Down arrow, choose Cable TV or Off-Air Antenna on the menu.
6. Press the Right or Left arrow to begin the Channel Search.
7. Press ENTER after the channel search is complete to remove menu.

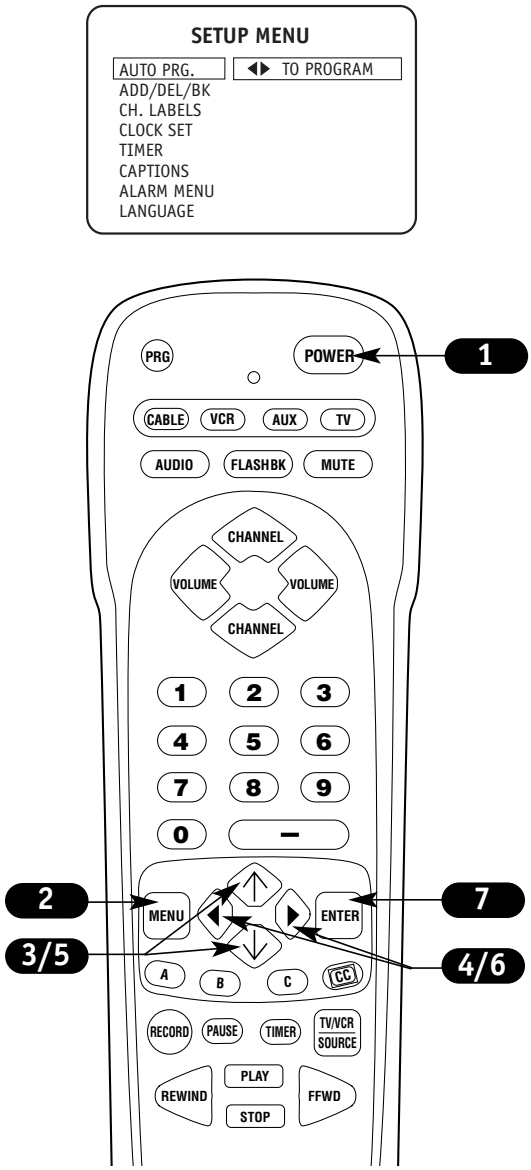
Auto Program finds channels being received by the TV's analog and digital tuners.

Cable will not work unless you subscribe to a cable service.

After the channel search is complete, use the features on the following pages to: Add/delete/blank channels, Include channel labels, so that they appear on the channel / time / audio display. Choose from the preset label selections.

Channels labels are only available for analog channels.

Channel search for digital channels is available in either the cable or off air antenna option.



Mini Glossary

On the Auto Program Menu, select:

OFF AIR ANTENNA — If only over-the-air channels are available, select Off-Air Antenna/Digital Air.

CABLE/DIGITAL AIR — If you subscribe to a cable service, select Cable TV/Digital Air.

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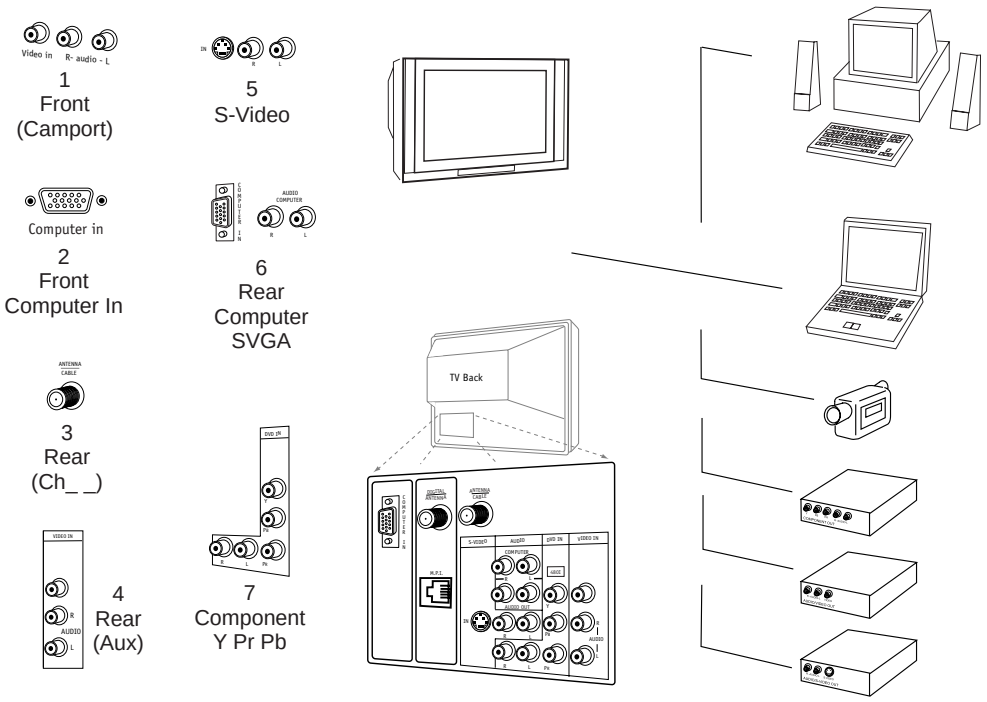
Picture/Sound Source Selection

Make connections, use the TV/VCR Source key, or use the Source menu to choose the picture and sound sources available for viewing on the TV screen



Priority of Source Selection

Typical Auto Sense Sources available if the Auto Sense feature is on.

1st. Front Audio/Video In (CamPort)
-No other sources available

2nd. Front Computer In (ComPort)
-No other sources available

Other Selectable Sources if:

1. Front Audio/Video In, *is not connected, then.*
2. Front Computer In, *is not connected, then.*

3rd. Antenna/Cable
4th. Aux Video
5th. S-Video
6th. Rear Computer SVGA
7th. Component Y Pr Pb

Select 3, 4, 5, 6 and 7 using TV/VCR Source, or the Source menu.

Note: Auto Sensing can be disabled and source priority selection can be changed in the service menu, see service manual.

Make connections to Front Audio/Video In or Front Computer In, to use these Auto Sense sources. Disconnect device(s) when finished.

To access other available sources, press TV/VCR SOURCE repeatedly to show selectable sources on the screen. Highlight the source you want to display, then press ENTER to change to the source.
Note: The rear Audio/Video In jacks can be selected by keying in 999 on the remote control number keypad.

Auto Sense source connections override all other sources. The front Video In jack and the front Computer In port are Auto Sense source inputs. If you have device(s) connected to either of these inputs, you will not be able to change channels or sources until you have disconnected the device(s).

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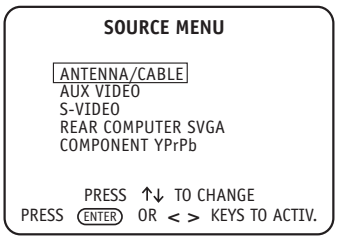
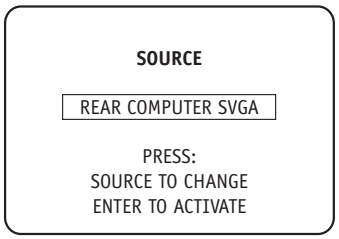
Source Menu

Choose the source of the picture and sound



Selecting Viewing Sources with the Source Menu



Selecting Viewing Sources with the TV/VCR Source Key on Remote

1 **Source Selection**
Press TV/VCR SOURCE on the remote repeatedly to cycle through the available sources.
Note: See previous page for source connection priorities.

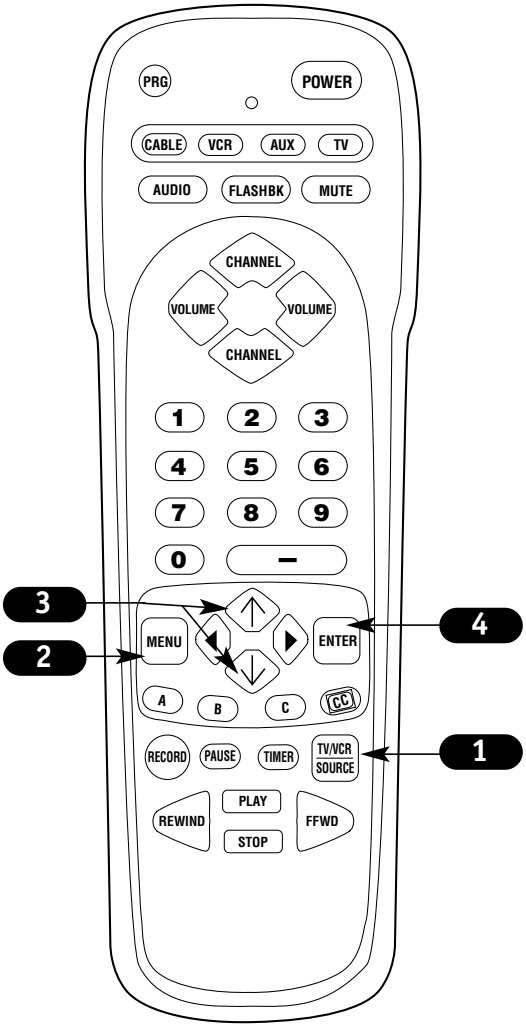
2 **Source Selection using Source Menu**
Press MENU on the remote repeatedly until the Source menu appears.

3 Use the Up/Down arrow on the remote control, to select a new source for the picture and sound that you want to to appear on the screen.

4 Press ENTER on the remote, to change to the new source, press ENTER again to remove menu.

Menu Operation/Front Control Panel
The menus can also be operated by using the TV front control panel buttons. See page 24 for menu operation instructions.
If you need to key-in numbers, use the remote control.

Note
If the source you want to select does not appear as an option on the Source menu, it may be set to '0' in the installer menu. Review installer menu settings for Auto Camport and Auto Compport.



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On-Screen Menus Overview

Brief descriptions of the menus / on-screen displays on the Presentation TV

Using the MENU key and other keys indicated on the remote, the user can access the menus and displays described below.

Menu Name	Page	Description
		ON-SCREEN MENUS
SETUP MENU		Adjusts the basic characteristics of the TV.
Auto Program	26	Automatically finds and stores active channels for the user to scroll through using Channel Up/Down.
Add/Del/Blank	31	Manually sets up which active channels will appear or not appear when using Channel Up/Down.
Channel Labels	32	Labels the channels with their network names (ABC, CBS, HBO, etc.).
Custom Ch Labels	33	Creates custom channel labels.
Clock Set	34	Sets the time.
Timer	35	Sets times for the TV to automatically turn itself off/on each day.
Analog Captions	36	Selects Caption/Text options.
Digital Captions	37	Selects Digital Captions options.
Alarm Menu	38	Sets a time for the TV to automatically turn itself on.
Language	39	Selects the language the on-screen menus will appear in.
ANALOG AUDIO	40	Customizes the sound for the end-user. The options are:
DIGITAL AUDIO	41	Bass, Treble, Balance, Audio Mode, SoundRite, Front Surround, Speakers, Audio Pref.
VIDEO MENU	42	Customizes the picture for the end-user. The options are: Contrast, Brightness, Color, Tint, Sharpness, Picture Pref.
PARENTAL	36	Allows user to block program content or the A/V sources for up to 99
CONTROL MENU		hours, with the use of a password.
SOURCE MENU	39	Selects available viewing sources connected to the TV.
		OTHER MENUS AND ON-SCREEN DISPLAYS
Source Menu	30	Selects viewing sources directly; use TV/VCR/SOURCE to switch between available sources.
Alarm Menu	30	Sets a time for the TV to turn itself On.
Sleep Timer	30	Sets a preset time that the TV will turn off up to a maximum of four hours; press TIMER to activate.
Ghost Channel	30	Shows a scrolling channel number on right side of screen.
Channel/Time	30	Shows the current time, channel, video and type of incoming audio signal, or mute. And shows XDS info if available.
Channel Preview	30	Displays the available channels list; press SURF to activate.
Volume	30	Shows current sound level setting; press VOLUME Up/Down to activate.
Captions/Text	30	Shows selected Caption/Text option; press CC once to show option, repeatedly to toggle option On/Off.

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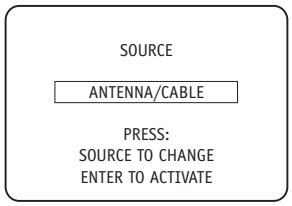
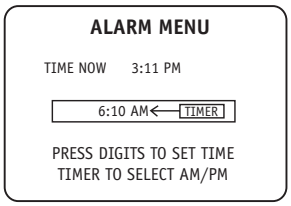
Other Menus and On-Screen Displays

Press the remote keys indicated below to access these menus and displays

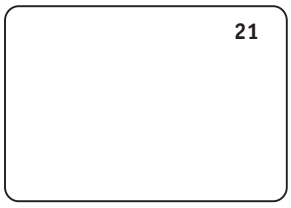


Source Menu
Press TV/VCR SOURCE. Gives access to available picture/sound sources.

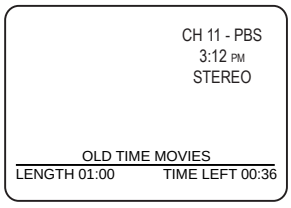


Alarm Menu
In the Setup Menu, select the ALARM MENU option. Set a time for the TV to automatically turn itself On.

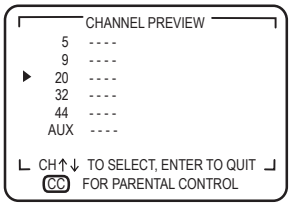
Sleep Timer Menu
Press TIMER. Shows remaining time before TV shutoff. Press TIMER repeatedly to select a pre-set turn Off time from 10 minutes to 4 hours.



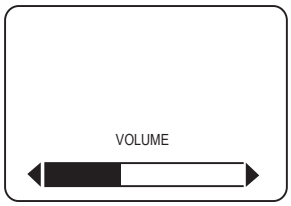
Ghost Channel Display
Channel number appears on the right side of the picture and slowly scrolls downward. To disable Ghost Channel, see Installer menu.



Channel/Time/Audio Display
Press ENTER. Shows currently selected channel or source, current time if the clock has been set, incoming audio signal, and XDS info if available on channel.



Ch Preview Menu
Press SURF. Displays list of the available TV Channels, sources, and provides access to the Parental Control menu.

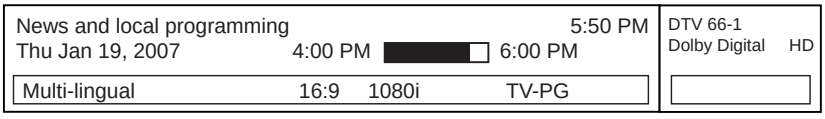


Volume Display
Press VOLUME. Shows present sound level.

Closed Captions Menu
Press CC. Depending on Captions setup, turns selected Caption / Text option On and Off.

Digital Captions On-screen Display

Press ENTER twice to see the on-screen display for digital channels. Reveals channel number and program details: Title, day, time, languages available, audio options available, video formats available, Closed captions options available, etc.



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Channel Add-Delete-Blank

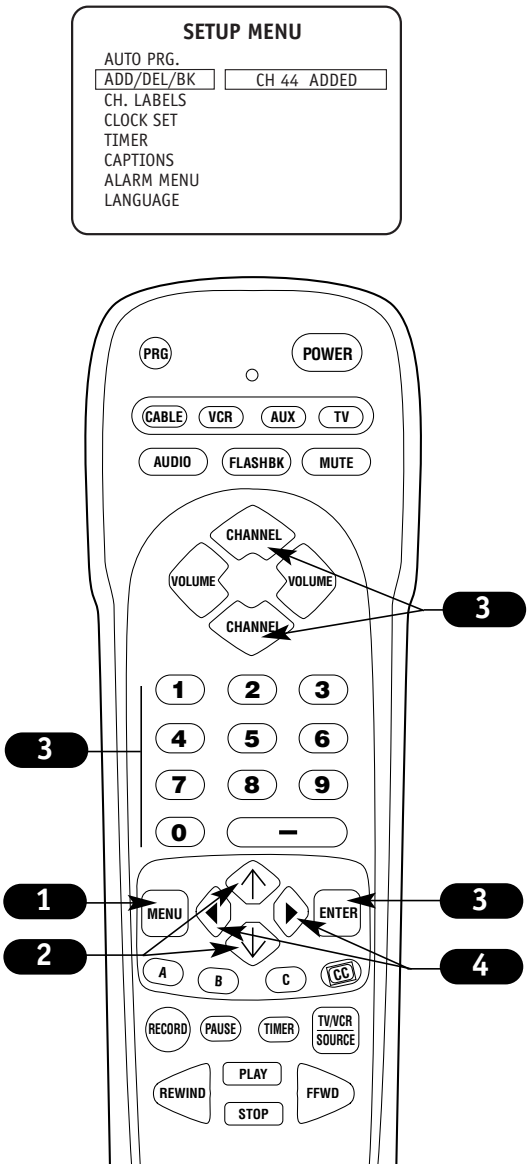
Fine-tune the channel selection list

Menu Operation/Front Control Panel
The menus can also be operated by using the TV front panel controls.
See page 24 for menu operation instructions. If you need to key-in numbers, then use the remote control.

1. Press MENU repeatedly on the remote until the Setup menu appears.
2. Use the Up/Down arrow to highlight and select the Add/Del/Bk option.
3. Using either the NUMBER keypad and ENTER or the Channel Up/Down arrows on the remote, select a channel. (If adding a deleted channel, you will need to use the NUMBER keypad and ENTER.)
4. Using the Right or Left arrow, choose whether that channel is Added, Deleted, or Blanked.
5. To continue, select another channel and repeat Step 3. When you are finished, press ENTER to remove menu.

Adding Aux, VCR 3, and VCR 4, to the Channel Preview List
Go to the Setup menu, select the Add/Del/Bk option. Use Channel Up/Down to select the option and choose Added.

Notes
- If the option was turned Off in the Service menu, you will have to reinstate it before it will appear as an option in the Channel Preview list.
- You can specify Add, Delete, or Blank for **VCR3**, **VCR4**, and **Aux**. Caution: If you delete CH3, VCR3 is also deleted, if you delete CH4, VCR4 is also deleted and vise versa.
- *If you delete a channel, it isn't gone for good. Just select it using the NUMBER keypad on the remote, or add it later.*



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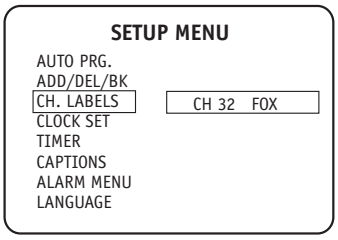
Channel Labels

Customizing channel names with Preset Channel Labels (Or, see the following page and create custom channel labels)



1. Using either the NUMBER keypad or the Channel Up/Down arrows on the remote, select a channel.

2. Press MENU repeatedly on the remote until the Setup menu appears.

3. Choose the Ch Labels option using the Up/Down arrow.

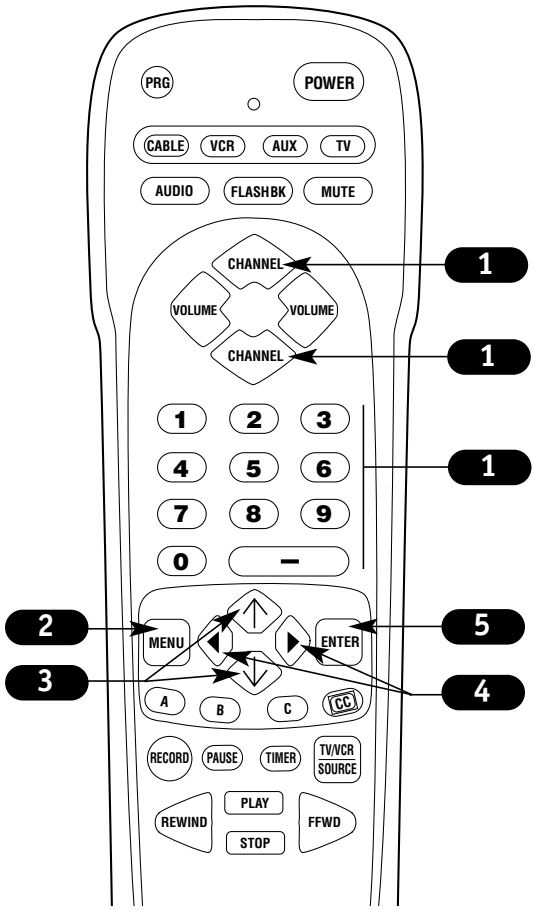
4. Pressing either the Right/Left arrow repeatedly, pick the label you want from the available preset selections; such as A & E.

5. To continue channel labeling, select another channel or if you are finished, press ENTER to remove menu.

Some channels already provide a channel label which is included on the broadcast signal.

Labeling the channels helps the user identify which familiar nationwide channels are available. i.e., A & E -Arts and Entertainment, CNN - News, ESPN - Sports, HBO - Movies and so on...

Menu Operation/Front Control Panel
The menus can also be operated by using the TV front panel controls.
See page 24 for menu operation instructions.
If you need to key-in numbers, then use the remote control.



Mini Glossary

- - - -	The 4 dashes will allow a channel label to appear; if one is provided by the broadcaster.
NONE	Prevents any channel label from appearing.
LAB 1 - LAB 20	Are the 20 programmable labels. These 20 labels can be customized with 5 characters spaces available for thru each label, see next page.

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Creating Custom Channel Labels

Customize channel names with custom channel labels

To Make Custom Channel Labels

1. First select a channel using the NUMBER keypad and ENTER or the Channel Up/Down arrows, on the remote control.

   (To select a deleted channel, use the NUMBER keypad and ENTER.)

2. To attach a channel label, press MENU repeatedly to go to the Setup menu, then select CH. LABELS.

3. Press the Right Adjust arrow to scroll the available preset labels. Scroll past - - - -, scroll past NONE, to go to the first programmable label slot, LAB 1 (Label 1). Notice that the label appears with the title LAB 1, and is also on a dark background; which will distinguish it from the preset labels.

Operating the Custom Labels Menu

4. Use Volume Left/Right to select the first letter.

5. Use Channel Up/Down to scroll through and change the character to one of the 255 characters available.

   Repeat Steps 4 and 5 to set characters for the other spaces available on the label.

6. Press ENTER to remove menu when finished.

Menu Operation Notes

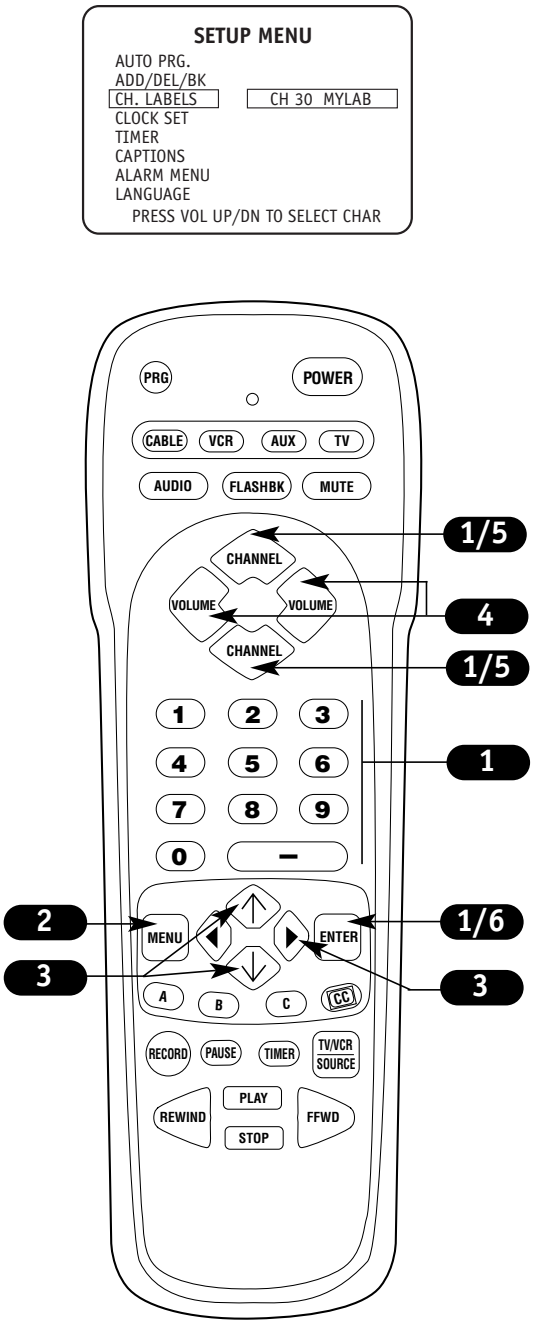
Adjust Left/Right: Switches to the next label; moves to the next or previous label.

VOLUME Up/Down: Selects character spaces; moves to the next or previous character space.

MUTE: Removes current label inserts NONE; if any character space is selected.

CHANNEL Up/Down: Scrolls through the available characters.

ENTER: Accepts the channel label and removes the menu.



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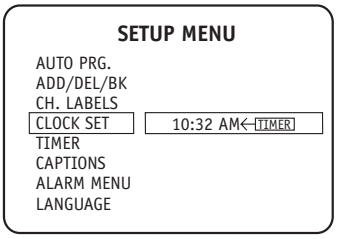
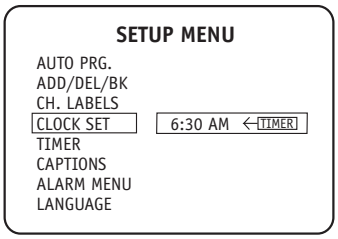
Clock Set

Set the Clock on the Presentation TV



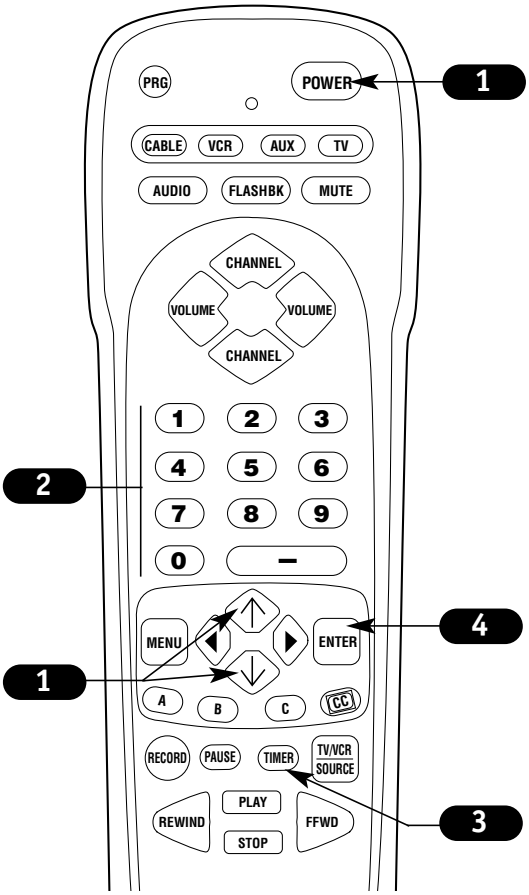


1. With the Setup menu displayed, use the Up/Down arrow to highlight the Clock Set option as shown.

2. Set the current time; use the NUMBER keypad to key-in the hours, then minutes. For example, press 06, then 30, to set 6:30 on the clock.

3. Use the TIMER key to set AM or PM, as shown on the menu.

4. Press ENTER to start the clock and return to TV viewing.



Mini Glossary

TIME	A four-digit figure broken down into hours and minutes, that is used to enter the current time when setting the clock.
HOURS	The first two digits that are entered when setting the clock.
MINUTES	The last two digits that are entered when setting the clock.
TIMER	Choose AM or PM when setting the clock.

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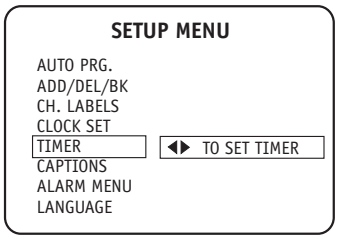
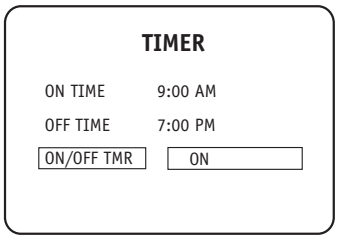
Timer (On-Off Timer Setup)

Set up On/Off Timers Note: On/Off Timers operate independently of each other.





1 On the remote, press MENU repeatedly until the Setup menu appears.

2 Use the Up/Down arrow to highlight the Timer option, press the Right arrow.

3 Use the Up/Down arrow to select an option.

4 Use the number keypad and/or the Left / Right adjust arrows to key in the times.

5 Use the TIMER key to set AM/PM.

6 Press ENTER to remove menu.

Your options are:

- **On Time**

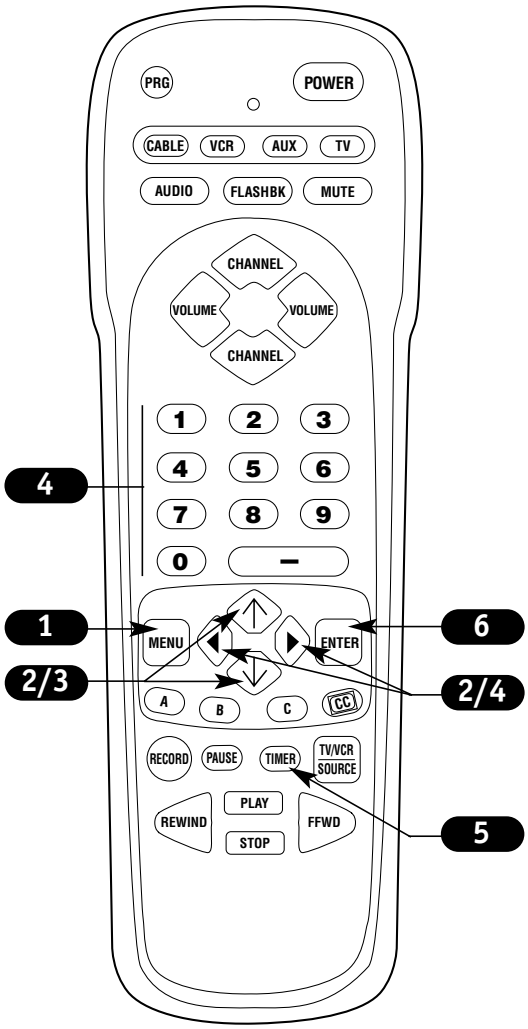
Sets a time that the TV will turn itself On each day.

- **Off Time**

Sets a time that the TV will turn itself Off each day.

- **On/Off Timer**

Enables or disables the On/Off Timer functions. (The On/Off Timer can be disabled but the settings will be retained.)



Notes

- *The clock must be set before the Timers will function.*
- *The Off Timer can be used to turn the TV Off at the preset time.*
- *No On Timer setting is required to use the Off Timer feature.*

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Captions: Analog-Digital Caption Setup Overview

Set up Closed Caption/Text options for the end user

Analog-Digital Closed Captions/Text Overview, End-user Setup

The caption/text feature is designed to be available to the end user on either an analog or digital channel. For the end user to get analog captions, all the user needs to do is press CC on the remote and select On - - same for digital channels, select On and pick a language. The installer can elect to make analog and digital captions available by turning captions on. The installer sets the caption options on both analog and digital menus. To set up digital captions, the installer must tune in a channel with digital captions. Use 'Set by Program' to show digital captions that are similar in appearance to analog captions e.g. white text on black.

End User Captions Operation

If both analog and digital captions are turned on by the installer, analog and digital captions will be available to the end user. If digital captions are not available on a digital channel and analog captions are, then analog captions will appear.

Analog Closed Captions/Text Operating Modes Setup

On the optional Installer's remote, use MENU, SELECT, and ADJ (Left/Right) arrows to choose Closed Captions / Text mode and set up other options for the end user.

Quick/Mute When CC is pressed: End user can only turn Captions On/Off.
(If CC on Mute is On, shows captions when sound is muted.)
(If locked, caption type is retained with Power On/Off.)

Standard When CC is pressed: End user can choose a captions type.
(If locked, type is retained with Power On/Off.)

Press ENTER to remove menus.

Digital Captions Operating Modes Setup

On the optional Installer's remote, use MENU, SELECT, and ADJ (Left/Right) arrows to configure the Digital Captions appearance.

Language Selects the default Digital Caption Language.

Style:

Set By Program Captions appear white text on black, similar to analog captions.

Custom The installer configures the Digital Captions appearance, see the next page for the digital captions appearance options available.

Press ENTER to remove menus.

Standard closed captioning is available using the Caption 1 option.

Caption/Text are features which allow the TV to display the closed caption and/or text options if made available by the broadcaster.

Availability and functionality of Caption/Text options are determined only by each broadcaster and may not be available on every program.

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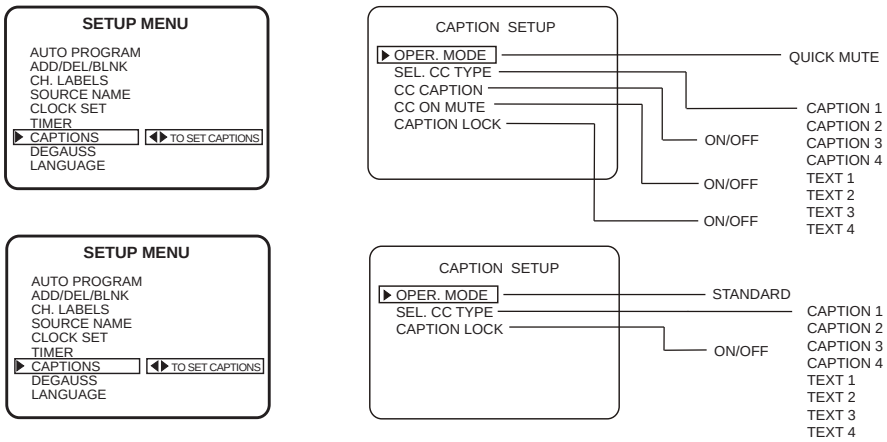
Captions: Analog-Digital Menu Structures

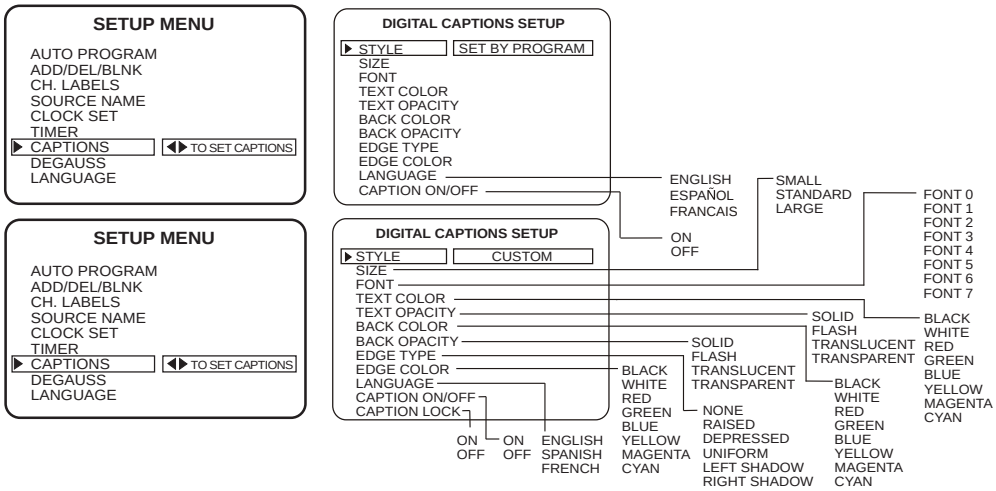
Review Analog and Digital Captions options available
Note: Digital captions are only available on some digital channels.

Analog Captions Menu Structure



Availability and functionality of Analog Captions are determined only by each broadcaster and may not be available on every program.

Digital Captions Menu Structure



Availability and functionality of Digital Captions are determined only by each broadcaster and may not be available on every program.

Mini Glossary

CAPTIONS The term for the words that scroll across the bottom of your TV screen; usually the audio portion of the program provided for the hearing impaired.

TEXT The term for the words that appear in a large black frame and almost cover the entire screen; usually messages provided by the broadcaster. (Only available on analog channels.)

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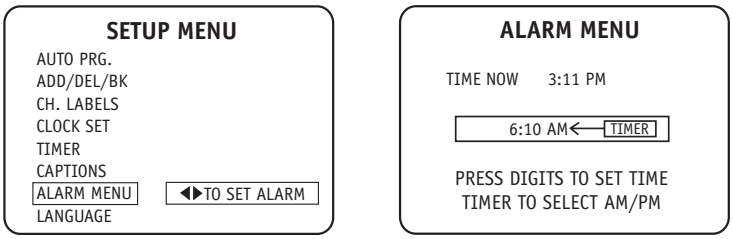
Alarm Menu

Use the Alarm menu to set a time for the TV to automatically turn itself On



1 With the Alarm Menu option highlighted in the Setup menu, press the Left/Right arrow to go to the menu.

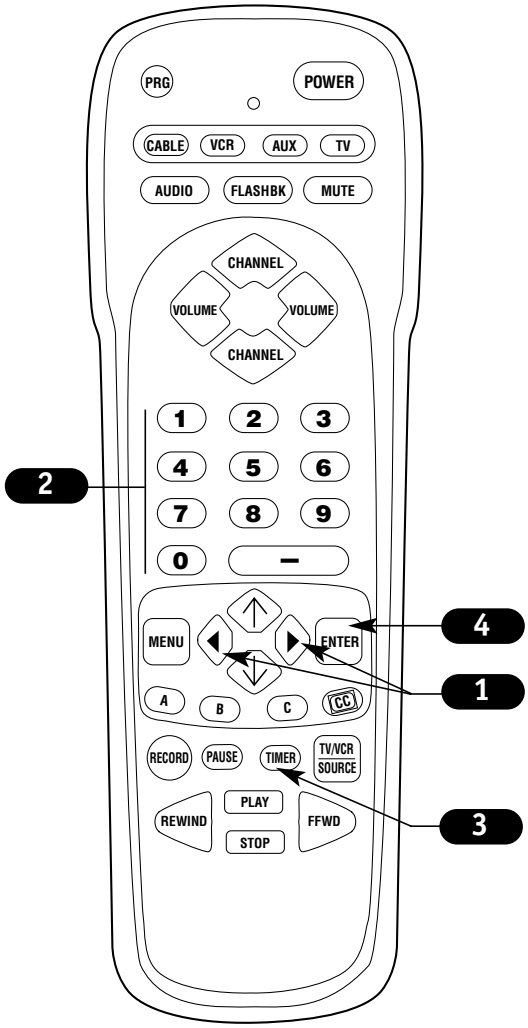
2 Using the NUMBER keypad, set the time you want the TV to turn on. For example, to set 7:30 AM, key in 0, 7, 3, 0.

3 Use TIMER to choose AM or PM, as shown on the menu.

4 Press ENTER to remove menu from screen.

The alarm will only work if the TV is turned Off.

Be sure the TV's internal clock is set to the current time, so that the wake up alarm will work properly.



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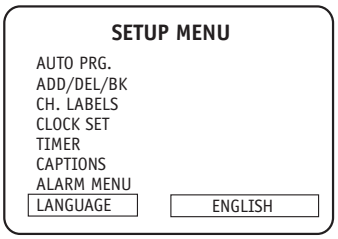
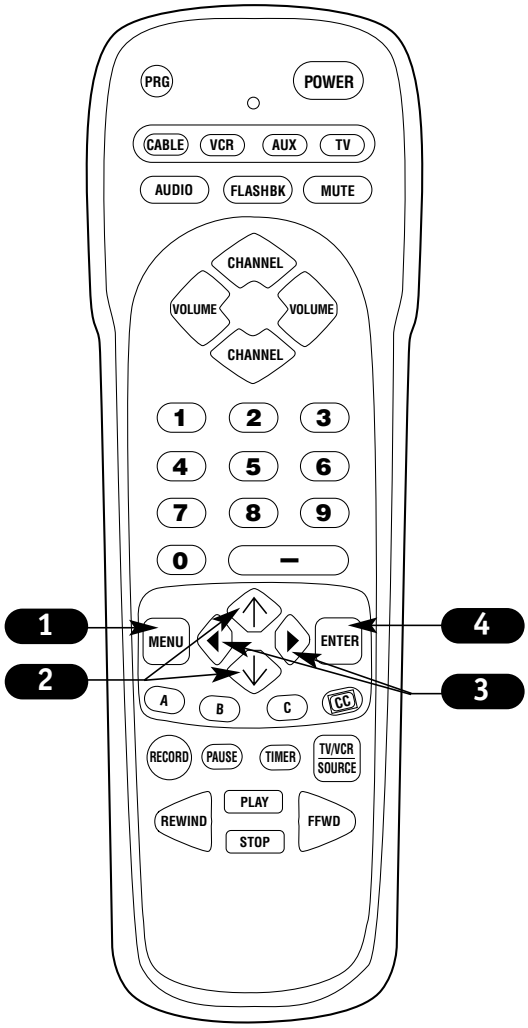
Language

Select the language for the on-screen menus

Menu Operation/Front Control Panel
The menus can also be operated by using the TV front panel controls.
See page 24 for menu operation instructions.
If you need to key-in numbers, then use the remote control.



1. Press MENU on the remote repeatedly until the Setup menu appears.
2. Use the Up/Down arrow on the remote control to highlight and select the Language option on the menu.
3. Use the Left/Right arrow to choose one of the following options: English, Spanish or French.
4. Press ENTER to save and remove menu.



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Audio Menu

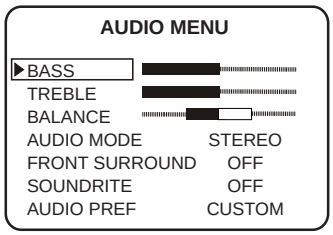
Set up the audio menu options for the end user

1. On the remote, press MENU repeatedly to go to the Audio menu.
2. Using Up/Down arrows on the remote control, highlight the audio menu option you want to change. Choose from:
   - Bass: Increases/decreases lower-end sounds.
   - Treble: Increases/decreases higher-end sounds.
   - Balance: Allows you to put the sound more to the left or right channel.
   - Audio Mode: Choose from Stereo sound, Mono, or 2nd Audio/SAP.
   - Audio Lang: Choose from English, Spanish or French Audio Language default. (Only available on Digital Channels.)
   - Front Surround: Turns front surround speakers on and off.
   - SoundRite: Turns the uniform volume feature on and off.
   - Audio Pref: Selects Custom or Preset.
3. Use the Left/Right ADJ arrow to adjust or change the option you have selected.
4. Use Up/Down arrows to choose other Audio menu options, or press ENTER to remove menu.
5. Use the Audio button to scan the Audio Languages available for a Digital Channel.

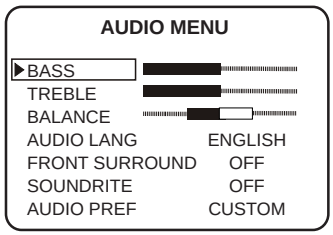
Not all programming is broadcast in stereo sound or has 2nd Audio SAP.

Not all Digital Channels offer more than one audio language. (See the next page.)

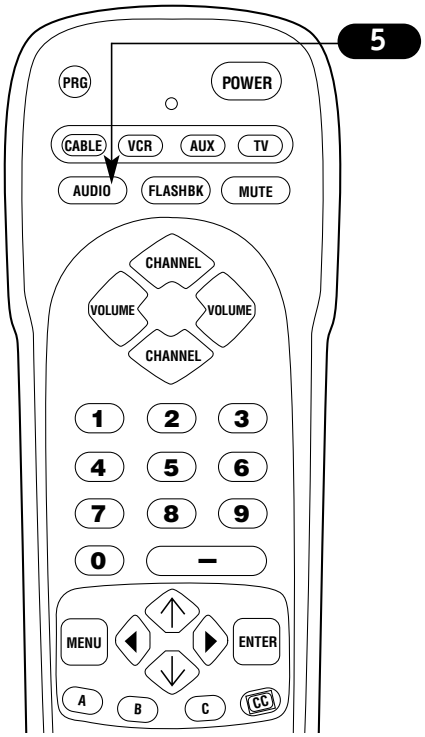
The audio language selected must actually contain audio so that it can be heard by the end user.



Analog Channel Display



Digital Channel Display



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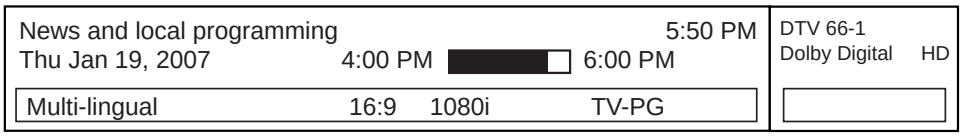
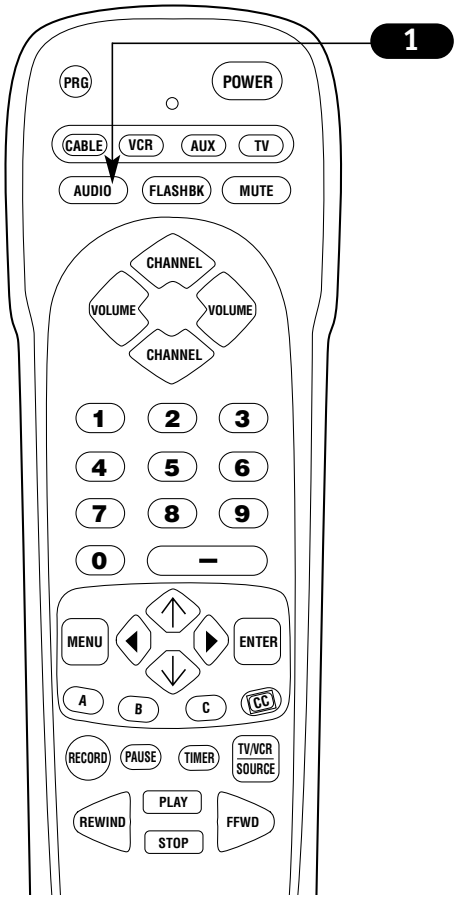
Audio Menu: Digital Audio Language Selection

Use the AUDIO button to select digital audio languages, if available



Indicates the broadcast has additional audio languages available.

Note: The broadcaster has control of any additional languages available. If a program display shows another language is being broadcast, press the AUDIO button to select that audio. **If however, no other language is being included on the program's signal, no other audio will be heard.** This condition is not the fault of the TV. If no other language is being broadcast, the TV can't play it. To hear audio, you must select an active language.



1 On the remote, press AUDIO repeatedly to scroll the available digital audio languages on the selected channel.
• As mentioned above, even though another language is indicated as being available, if it is not being added to the audio signal, no audio will be heard for that additional language.

Mini Glossary

STEREO SOUND	Stereo (stereophonic) sound refers to audio that's divided into right and left sides.
MONO SOUND	Mono (monaural) sound is one channel of sound. On more than one speaker, all the speakers play the same audio.
CUSTOM	Your own audio menu settings.
PRESET	Resets audio menu values to their original settings.

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Video Menu

Use the Video Menu to customize the picture's appearance

1 On the remote, press the MENU key repeatedly until the Video menu appears. Your options are:

- Contrast: Adjusts the level of difference between white and black in the TV picture. The more contrast, the brighter the picture appears.
- Brightness: Increases or decreases amount of white in the TV picture.
- Color: Adjusts levels of all colors in the TV picture.
- Tint: Adjusts the relative amounts of red and green in the picture.
- Sharpness: Raises or lowers the definition of the picture. The lower the level, the softer the image will appear.
- Aspect Ratio: (Digital channels) Modifies height and width ratio of the picture when available from the broadcaster. Aspect Ratio options: Zoom, Full Screen, Letter box.
- Picture Preference: Choose either Custom or Preset:
  Custom = Allows you to set the picture appearance to your requirements.
  Preset = Resets all the above options back to their original, factory-set levels.

2 Using Up/Down arrows on the remote control, choose Contrast on the menu.

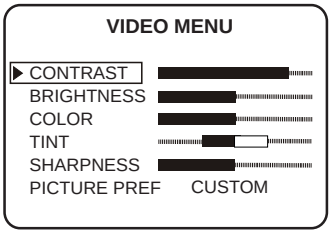
3 Use the Left/Right ADJ arrow to change or adjust the contrast level as required.

4 Press ENTER, to remove the menu, or repeat from Step 2 to adjust other Video menu options.

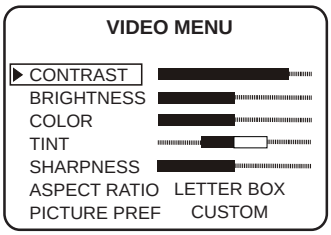
Choose the Preset option in Picture Preference to quickly reset the Video menu options to their original default values.

Aspect Ratio is only for Digital Channels. The availability of Aspect Ratios are determined only by the broadcaster and may not be available on all programs.

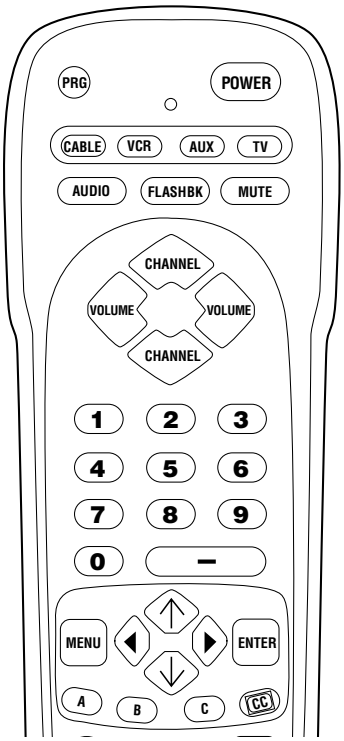
Aspect Ratio options are not available for 480i (SD) digital channels.



Analog Channel Display



Digital Channel Display



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Parental Control Menu

This feature can "block" undesirable programming from appearing on the TV. Set restrictions using Age Block for all programming, TV and movies.

End user can only set restrictions using Ch Preview menu on any Analog channel or Aux source (some models digital channels also). The TV will employ parental control restrictions on analog and digital channels if V-Chip data is included on the program.

Overview

Parental Control offers the user a wide variety of options and settings that restrict or "block" the programming that can appear on the TV. Parental Control allows the user the capability of defining which program rating they consider acceptable, to the younger or more sensitive viewer. It can be preset and turned either on or off by the user who specifies a secret 4-number code, the password. General audience and children viewer blocks can both be programmed into the TV's memory. Viewer ratings are specified for both TV and the motion picture industry; both rating systems should be used, for complete coverage. The ratings are based on the ages of children. The number of hours blocked are specified. (See following pages.)

To insure complete coverage for all TV programs, (movies and regular TV shows) choose a rating for MPAA to restrict movies from the selections on the following pages. AND choose ratings from the TV Parental Guidelines Rating System also on the following pages, using the Age Block option for General Audiences and for Children. In addition to those, you may wish to add additional restrictions from the Content Block sub menu. See the Parental Control menu and submenus examples on the following pages.

Things to Consider before Setting Up Parental Control

- Determine which rating you consider acceptable to the viewer. For example, if you choose TV-PG, all more restrictive ratings will be automatically blocked; the viewer will not be able to see: TV-PG, TV-14 or TV-MA rated programming.
- Do you want to block the auxiliary video source entirely? (Blocks the signal sent by the equipment, such as a VCR, connected to the TV Audio/Video input jacks; in the Aux. Sources option.) Or leave unblocked, then choose allowable ratings.
- Block program "Content" based on individual parameters such as: Strong Dialog, Bad Language, Sex Scenes, Violence Scenes or Fantasy Violence Scenes; in the Content Blk option.
- How many hours do you want Parental Control to be active? You can set the Hours option for up to 99 hours.
- Select a password; in the Set Password option. Use the numbered keys on the remote to set a password. Don't forget the password.

Note: Reset Parental Control Block Hours to Zero and Cancel Password

This provides the institution staff and the installer a means to reset the TV to normal operation; if a user has either forgotten the password or has left Parental Control blocks active.
Note: Installer Menu item 0-I Installer Seq must be set to 0 for this to work.
On the optional installer's remote control, press and hold down MENU until the menu disappears (takes about 8 seconds). Immediately press 9, 8, 7, 6 and then CC. This will reset the Block Hours to Zero and cancel the current 4-number password.

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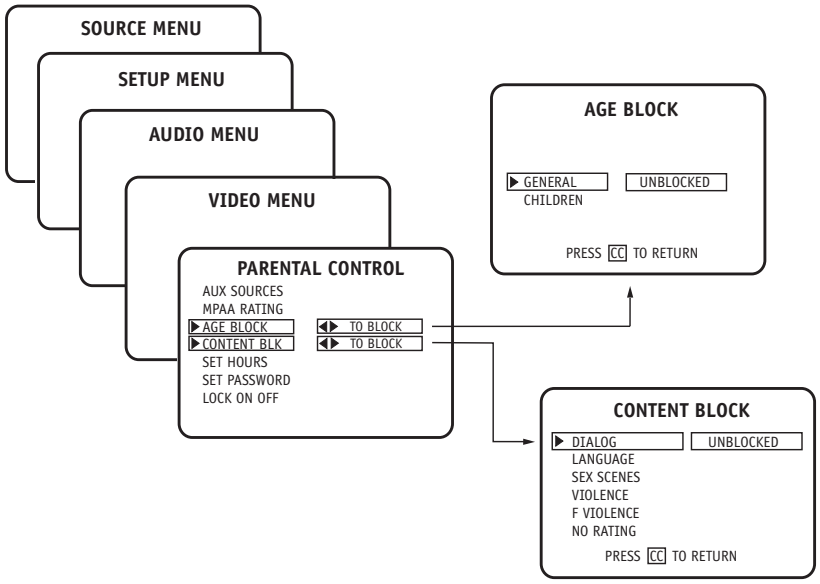
Parental Control Menu

After you have read the preceding page, follow instructions below to set up and activate Parental Control

1



2 As shown above with the Parental Control menu on-screen, use Up/Down to highlight an option like Age Block for TV programs and movies, then press the Right ADJ arrow.

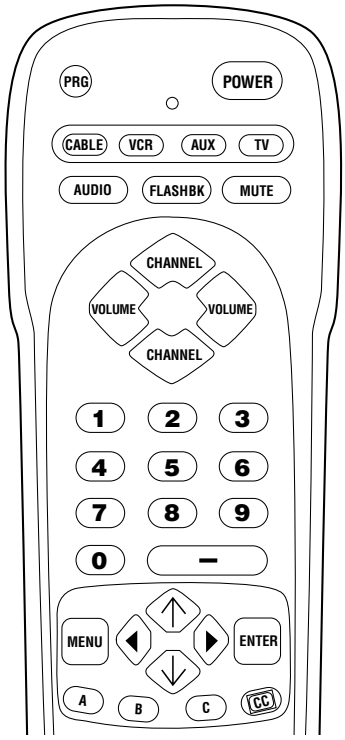
3 Use Up/Down/Left/Right arrows to select and adjust or set the rating for an option. For Sex Scenes for example, use the "From TV-PG" setting.

(See the Parental Ratings Charts on the next page for TV/Movie rating definitions).

4 After you have selected and adjusted the parental control menu options to your requirements:

- Set the hours you want Parental Control active.
- Set a 4-number password.
- Set the Lock On/Off option to On or Off.

No Rating means that the broadcast does not include rating information. You can choose to block broadcasts without V-Chip rating data.



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Parental Control TV/Movie Rating Guidelines

TV Parental Guidelines Rating System

TV-G	General Audience	Considered suitable for all audiences; children may watch unattended.
TV-PG	Parental Guidance Suggested	Unsuitable for younger children, may contain: Suggestive Dialog, Foul Language, Sex and Violence Scenes.
TV-14	Parents Strongly Cautioned	Unsuitable for children under 14, may contain: Strong Dialog, Foul Language, Sex and Violence Scenes.
TV-MA	Mature Audiences Only	Adults only, may contain: Strong Dialog, Foul Language, Sex and Violence Scenes.

CHILDREN'S CLASSIFICATIONS

TV-Y	Children	Considered suitable for all children under 7 years old.
TV-Y7	Children 7 and over	Considered suitable for children over 7, may contain Fantasy Violence Scenes.

Motion Picture Association Of America (MPAA) Rating System

G	General Audiences	Content not offensive to most viewers.
PG	Parental Guidance Suggested	Content is such that parents may not want their children to view the program.
PG-13	Parental Guidance Suggested	Program is inappropriate for preteens, with a greater degree of offensive material than a PG rated program.
R	Restricted viewing	Not for children under age 17. Strong elements of sex and/or violence.
NC-17	Restricted Viewing	Not for children under age 17 under any circumstances. Strong sexual content.
X	Hard Core Films	Same as NC-17 rating.

Note: LG Electronics Corporation is not liable for any program content that appears when using this rating system; as always, user discretion is advised.

You can set different Parental Control viewing restrictions for general audiences and for children - - both can be active at the same time.

Simply specifying one TV program content block such as Sex Scenes, will not automatically block another undesirable content in the TV program from appearing.

Even if you choose to leave the Aux Sources unblocked, the ratings you specify will automatically restrict the programming from the video sources.

You cannot disable Parental Control by disconnecting the TV from power. Block hours will automatically reset to time remaining if power is disconnected.

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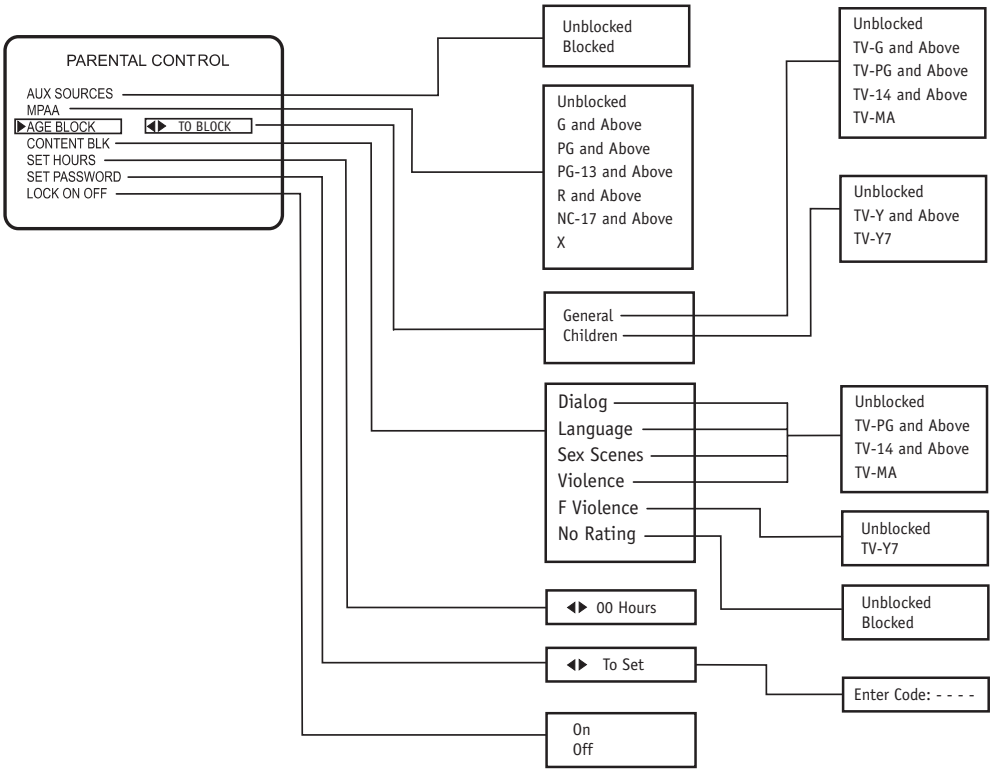
Parental Control Menu Structure/V-Chip Installer Setups



Note: Reset Parental Control Block Hours to Zero and Cancel Password

This provides the institution staff and the installer a means to reset the TV to normal operation; if a user has either forgotten the password or has left Parental Control Block active.

On the optional installer's remote control, press and hold down MENU until the menu disappears (takes about 8 seconds). Immediately press 9, 8, 7, 6 and then CC. This will reset the Block Hours to Zero and cancel the current 4-number password.

Make Parental Control restrictions permanent, with no preset or fixed hours time limit

In the Installer's Menu, set
Item 84: PERMANENT BLK, 0 or 1.
0 Restrictions limited to specified hours, 12 - 99.
1 Blocking restrictions always active, no time limit.

Reset the Maximum Number of Parental Control Default Block Hours

You can change the Block hours from the 12-hour default setting to up to 99 hours.

In the Installer's Menu, item: 22-I MAX BLK HRS 12, use the ADJ Left/Right Adjust arrow to set a different default number of hours.

Turn Parental Control Feature Off/On

In the Installer's Menu, installer items:

21-I V-CHIP, 0 = disable, or 1 = enable

51-I DIS. VCHIP M., 0 = enable, or 1 = disable

Options Setups for V-Chip Menu and Block Functions

For Installer items: 21-I V-CHIP, 51-I DIS VCHIP M

0 0 No menu, no blocking.

0 1 No menu, no blocking.

1 0 Shows menu, Block functions.

1 1 No menu, Block functions.

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Installer Menu

Use the Installer Menu to set up or change operational settings.
See detailed descriptions of the Installer Menu items on the following pages

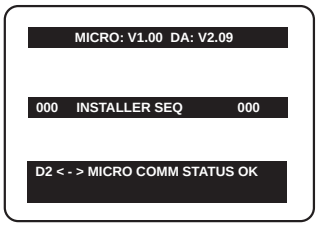
Installer menu items can be accessed by using the remote control. Just press and hold MENU (about 8 seconds) until the menu disappears. Key in 9, 8, 7, 6, then ENTER. To remove the Installer's Menu, press ENTER. Any changes you make will be stored in nonvolatile memory.

The Installer menu opens with item 000 Installer Seq. Use Up/Down arrows to sequence through the installer menu. Use Up/Down arrows to scroll items in the menus. To change a setting use the Left/Right ADJ keys. Press ENTER to remove menu.

Using the Installer Menu

Items 000 - 103 are accessible only in the Installer Menu. Their numbers, descriptions, ranges, factory default settings, and a place for listing any changes made on site are given below and on the following pages. To direct enter an item, key in its number and press Menu.

The Factory Menu that is intended for qualified service technicians only, is not shown. 8-F Menu Items (not shown here) are service type adjustments and only qualified technicians having specialized test equipment should access them.



Typical Installer Menu

Menu Item	Function	Value Range	Default Value	Brief Description of Function and Comments
0-I.	INSTALLER SEQ	0 - 3	0	Leave default set at 0.
1-I.	POWER MANAGE	0 - 7	0	Sets number of hours of no activity before auto shutoff.
2-I.	AC ON	0 / 1	0	Set to 1 to enable auto turn on at power up.
3-I.	BAND-AFC	0 - 7	0	Sets Tuning band.
4-I.	STRT CHANNEL	0 - 255	255	Channel at turn-on (255 for last Channel). For digital channels, use with item 101-I Start Minor Channel.
5-I.	CHAN LOCK	0 / 1	0	When set to 1, cannot tune from current channel.
6-I.	GHOST CH	0 / 1	0	Set to 1 to enable Ghost Channel display.
7-I.	START VOLUME	0-63, 255	255	Volume level at TV turn-on (Set 255 to retain last level).
8-I.	MIN VOLUME	0 - 63	0	Minimum volume setting.
9-I.	MAX VOLUME	0 - 63	63	Maximum volume setting.
10-I.	MUTE DISABLE	0 / 1	0	Set to 1 to disable Mute function.
11-I.	KEY DEFEAT	0/ 1	1	Set to 1 to disable the front panel keyboard MENU, SELECT and ADJUST keys.
12-I.	NOT USED			
13-I.	NOT USED			
14-I.	NOT USED			
15-I.	SLEEP TIMER	0 / 1	1	Set to 1 to enable Sleep Timer.
16-I.	EN TIMER	0 / 1	1	Set to 1 to enable Timer.
17-I.	ALARM	0 / 1	1	Set to 1 to enable Alarm.
18-I.	NOT USED			
19-I.	NOT USED			
20-I.	FEATURE LEVEL	0 / 1	1	Zen 1 Leave default set 1 (1 Zen1).
21-I.	V-CHIP	0 / 1	1	Set to 1 to enable V-Chip (Parental Control).
22-I.	MAX BLK HRS	0 - 99	12	Sets number of Parental Control blocking hours.
23-I.	CAPTION LOCK	0 / 1	0	Set to 1 to retain caption setting at turn Off.
24-I.	TEXT MODE	0 / 1	1	Set to 1 to add Text option to Closed Caption menu.

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Installer Menu

Installer Menu Items 25-I through 61-I

Menu Item	Function	Value Range	Default Value	Brief Description of Function and Comments
25-I.	FUNCTION PRE.	0 - 3	0	Controls channel preview in Pay-Per-View function menu.
26-I.	NOT USED			
27-I.	NOT USED			
28-I.	CH OVER RIDE	0 / 1	1	When set to 0, limits direct access to favorite channels and locks Auto Program.
29-I.	OLD OCV	0 / 1	0	OCV should set to 1.
30-I.	ACK MASK	0 / 1	0	M.P.I. communication parameter.
31-I.	POLL RATE	20 - 169	94	M.P.I. communication parameter.
32-I.	TIMING PULSE	186 - 227	207	M.P.I. communication parameter.
33-I.	NOT USED			
34-I.	CAMPORT EN	0 / 1	1	Set to 1 to enable the front AUX (Camport) input.
35-I.	NOT USED			
36-I.	NOT USED			
37-I.	REAR Y-C EN	0 / 1	1	Set to 1 to enable the rear S-Video input.
38-I.	NOT USED			
39-I.	NOT USED			
40-I.	AUTO CAMPORT	0 / 1	1	Set to 0 to add 'Camport' to Source menu.
41-I.	AUTO COMPPORT	0 / 1	1	Set to 0 to add 'Front Computer SVGA' to Source menu.
42-I.	NOT USED			
43-I.	NOT USED			
44-I.	NOT USED			
45-I.	NOT USED			
46-I.	STRT AUX SRCE	1-2-4-5, 255	255	Sets the starting AUX source.
47-I.	AUX STATUS	0 / 1	0	Set to 1 for M.P.I. AUX source reported as Channel number instead of Channel 0.
48-I.	DIS SETUP M	0 / 1	0	Set to 1 to disable Setup menu.
49-I.	DIS AUDIO M	0 / 1	0	Set to 1 to disable Audio menu.
50-I.	DIS VIDEO M	0 / 1	0	Set to 1 to disable Video menu.
51-I.	DIS VCHIP M	0 / 1	0	Set to 1 to disable V-Chip (Parental Control) menu.
52-I.	DIS SOURCE M	0 / 1	0	Set to 1 to disable Source menu.
53-I.	DIS CHTIME	0 / 1	0	Set to 1 to disable Channel-Time on-screen display.
54-I.	EN SET COL	0 / 1	0	Set to 1 to enable custom color for the Setup menu.
55-I.	FOR SETUP M	0 - 7	6	Custom foreground color for the Setup menu.
56-I.	BCK SETUP M	0 - 7	4	Custom background color for the Setup menu.
57-I.	EN AUDIO COL	0 / 1	0	Set to 1 to enable custom color for the Audio menu.
58-I.	FOR AUDIO M	0 - 7	1	Custom foreground color for the Audio menu.
59-I.	BCK AUDIO M	0 - 7	7	Custom background color for the Audio menu.
60-I.	EN VIDEO COL	0 / 1	0	Set to 1 to enable custom color for the Video menu.
61-I.	FOR VIDEO M	0 - 7	4	Custom foreground color for the Video menu.

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Installer Menu

Installer Menu Items 62-I through 87-I

Menu Item	Function	Value Range	Default Value	Brief Description of Function and Comments
62-I.	BCK VIDEO M	0 - 7	7	Custom background color for the Video menu.
63-I.	EN PTL COL	0 / 1	0	Set to 1 to enable custom color for the V-Chip (Parental Control) menu.
64-I.	FOR PTL M	0 - 7	6	Custom foreground color for the V-Chip (Parental Control) menu.
65-I.	BCK PTL M	0 - 7	4	Custom background color for the V-Chip (Parental Control) menu.
66-I.	EN SRC COL	0 / 1	0	Set to 1 to enable custom color for the Source menu.
67-I.	FOR SRC M	0 / 7	3	Custom foreground color for the Source menu.
68-I.	BCK SRC M	0 - 7	4	Custom background color for the Source menu.
69-I.	EN CHT COL	0 / 1	1	Set to 1 to enable custom color for the Channel-Time on-screen display.
70-I.	FOR CHT COL	0 - 7	1	Custom foreground color for the Channel-Time display.
71-I.	BCK CHT COL	0 - 7	1	Custom background color for the Channel-Time display.
72-I.	NOT USED			
73-I.	CH NOT AVBLE	0 / 1	0	If set to 1 and channel over ride is set to 0, "NOT AVAILABLE" message is displayed when directly accessing a channel not in the favorite channel list.
74-I.	CH-TIME SIZE	0 / 1	0	If set to 1 and transparent background is selected for Channel-Time display, (foreground color = background color and custom color enabled) a large channel number is displayed instead of the normal Channel-Time on-screen display.
75-I.	NOT USED			
76-I.	DEFEAT XDS	0 / 1	0	If set to 1, XDS display program information will not appear.
77-I.	NOT USED			
78-I.	UPN MSB	0 - 255	8	User programmable number, most significant byte. (Line - Day)
79-I.	UPN MSB1	0 - 255	8	User programmable number, most significant byte- 1. (Week)
80-I.	UPN MSB2	0 - 255	8	User programmable number, most significant byte- 2. (SN - HIGH)
81-I.	UPN LSB	0 - 255	8	User programmable number, least significant byte. (SN - LOW)
82-I.	CHKSM ERROR	0 / 1	1	Enforces rigid M.P.I. checksum.
83-I.	HANDSHK TIME	0 - 5	0	Relaxes M.P.I. timing to be compatible with PC based Windows controlled systems.
84-I.	PERMANENT BLK	0 / 1	0	Set to 1 to remove block hours setting for Parental Control and make blocks permanent.
85-I.	A MUTE TIME	0 - 254	20	Controls muting audio delay time when switching between AUX sources.
86-I.	V MUTE TIME	0 - 254	20	Controls muting video delay time when switching between AUX sources.
87-I.	NOT USED			

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Installer Menu

Installer Menu Items 88-I through 103-I

Menu Item	Function	Value Range	Default Value	Brief Description of Function and Comments
88-I.	EN NOISE MUTE	0 / 1	1	When set to 1, the audio signal volume is limited to a minimum value if no signal is being received from the broadcaster.
89-I.	POKE ENABLE	0 / 1	0	If set to 1, writing to Non - volatile memory through *M.P.I. is enabled.
90-I.	KEY LOCK	0 / 1	0	If set to 1, front keyboard functionality is disabled.
91-I.	NOT USED			
92-I.	NOT USED			
93-I.	NOT USED			
94-I.	NOT USED			
95-I.	AUDIO MD DISP	0 / 1	1	If set to 1, Audio Mode Information is enabled to appear in the Channel Time Display.
96-I.	NOT USED			
97-I.	NOT USED			
98-I.	NOT USED			
99-I.	NOT USED			
100-I.	ATSC TUNE MD	0 / 1	0	Sets ATSC tuning mode. Set to 0 for virtual channel, set to 1 for physical channel.
101-I.	STRT MINOR CH	0 ~ 255	0	Sets the starting minor channel. For NTSC set to 0. If not 0, sets minor channel number. Set to 255 to show last tuned channel at turn On.
102-I.	NOT USED			
103-I.	A RATIO LOCK	0 / 1	0	Set to 1, to retain current aspect ratio at turn Off. At turn On, last set aspect ratio will be used. Set to 0 to reset picture aspect ratio to default at TV turn On.

Detailed Descriptions of Installer Menu Items

0-I. INSTALLER SEQUENCE
Gives access to Installer Menu depending on the code selected.
0 = 9876 1 = 4321
2 = 1478 3 = 3698

1-I. POWER MANAGE (Power Management)
Determines hours of no activity before automatic shutoff. The POWER MANAGE function is for saving energy. When set to 0, Power Manage is Off. Settings range from 0 - 7, with 1 - 7 representing the hours that the TV will remain on, unless there has been activity from either the control panel or remote control.

*M.P.I. Multiple Protocol Input: Zenith protocol for remote control of TV through RJ11 (M.P.I.) jack on TV connections panel.

2-I. AC ON (AC Power Switchable)
Allows the TV to turn On just by applying AC power. Pressing the POWER button is not necessary. This is desirable when the TV is plugged into a cable box or a power outlet controlled by a wall switch. Use ADJ to select 0 or 1, where 0 is the default is Off, and 1 is On.
Note: When set to 1 (On), the TV does not respond to On/Off commands from either the remote or the control panel, and the SLEEP TIMER is also not functional.

3-I. BAND/AFC (Band/Automatic Frequency Control)
There are 8 possible settings for this option:
0 = Broadcast Fixed 4 = Broadcast AFC
5 = CATV Fixed 1 = CATV AFC
6 = HRC Fixed 2 = HRC AFC
7 = ICC Fixed 3 = ICC AFC

Channels are accessed faster when fixed modes are used. The AFC (search modes) should only be used

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when some channels are not on nominal frequencies. **Note:** BAND is automatically set by AUTO PROGRAM. If some channels were not found by Auto Prg. (Program), select the appropriate AFC setting here and add the channels using the ADD/DEL/Bk option in the Setup Menu.

4-I. STRT CHANNEL (Start Channel)

Important: For NTSC start channel, item 101-I STRT MINOR CHANNEL, must be set to 0. When active, this function allows you to determine the initial channel number when the TV is turned On. (To set a digital channel number, use with Item 101 Start Minor Channel.) This feature is useful for an in-house information channel, since the TV would always select that channel when it is turned On. Setting this to 255 causes the last channel viewed when TV was turned Off to be the tuned to channel when the TV is turned On again. The range of values is 0 - 255. Use ADJ (adjust) keys to choose numbers for the start channel.

5-I. CHAN LOCK (Channel Lock)

CHAN LOCK is ideal if a cable box (or similar) is the sole source for programming—and the TV must always be on the same channel. Changing channels with Channel Up/Down or keypad numbers is impossible. Channel Lock is inactive when set to 0 (default). Generally, this feature is used in conjunction with START CHANNEL (item 4-I.) where the start channel may, for example, be set to 3 or 4. If the start channel is 3, then the TV will remain on channel 3. **Note:** If CHANNEL LOCK is active and CHANNEL OVER RIDE is disabled, AUTO PROGRAM is not functional.

6-I. GHOST CH (Ghost Channel)

If set to 1, the current channel number is displayed in the upper right corner of the picture. The number moves slightly to prevent damage to the screen. The default is "0" or Off. NOTE: When captions are on, "Ghost Channel" is not displayed.

7-I. START VOLUME

This function allows the Installer to determine the initial volume level setting when the TV is turned On. This feature is useful for an in-house information channel, since the TV would always select that Volume level when it is turned on. The range of values are 0 - 63, 255. If 255 is selected, the current volume level will be retained in memory when the TV is turned Off. At TV turn On, Volume level is automatically set to the previous level.

8-I. MIN VOLUME (Minimum Volume)

This function determines the minimum volume level allowable with the VOLUME (VOL) Up/Down control. In this way, for example, someone cannot set the sound too low to hear. The range is from 0 to 63 change values with ADJ (Adjust) Left/Right keys. The factory default is 0, which provides full range of volume control. It may be best to set the same value on every TV.

Note: The minimum volume level cannot have a value setting higher than in the MAX VOLUME level (described below).

9-I. MAX VOLUME (Maximum Volume)

This function determines the maximum volume level allowable with the VOLUME Up/Down control. In this way, for example, someone cannot set the sound level high enough to disturb others. The range is 0 to 63, with 63 as the default which gives the user the full range of volume control. Change values with Left/Right arrow keys. It may be best to set the same value on every TV.

Note: The maximum volume level cannot have a value setting lower than the MIN VOLUME level (See Item 8 -I).

10-I. MUTE DISABLE

Enables or disables sound mute function. If set to 1, sound cannot be muted. If set to 0, sound can be muted.

11-I. KEY DEFEAT (See Item 90-I)

Enables/disables the MENU, SELECT and ADJUST keys on the front panel. Set to 0 (Item 90-I set to 0 also) to enable, set to 1 to disable. If set to 1, KEY LOCK appears on the screen if either MENU, SELECT or ADJUST keys on front panel are pressed.

12-I. NOT USED

13-I. NOT USED.

14-I. NOT USED

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15-I. SLEEP TIMER
When set to 1, the Sleep Timer feature is available to the user (but no message is displayed prior to turn-off). When set to 0, the Sleep Timer is not functional.

16-I. EN. TIMER (Enable Timer)
Set to 1, On/Off Timer functions are available to end user. Set to 0 to disable Timer functions.
Note: Clock must be set in order to use Timers.

17-I. ALARM
Gives you the option of making the Alarm function available to the end user. Set to 1, Alarm function is available to end user. Set to 0 to disable the Alarm function. **Note:** Clock must be set in order to set the Alarm.

18-I. NOT USED

19-I. NOT USED

20-I. FEATURE LEVEL
Default set to ZEN 1 for Zenith IR remote control operation. Set 0, P LBL for Zenith Private Label IR remote control operation.

WARNING: Do not change the default value unless you have the proper remote control to operate the TV.

21-I. V-CHIP
Set to 1 to activate V-Chip (Parental Control); have it available to user to filter or control or restrict programming content. Set to 0 to turn V-Chip feature off, not available to user; no programming restrictions can be set.

22-I. MAX BLK HRS (Maximum Block Hours)
Set 0 to 99 for the maximum V-Chip (Parental Control) block hours. Default setup is for 12 blocking hours.

23-I. CAPTION LOCK
Set to 1 to restore previous Caption On/Off state after TV turns Off. When set to 0, Captions are always Off, when TV is initially turned On.

24-I. TEXT MODE
Determines whether TEXT 1, TEXT 2, TEXT 3, or TEXT 4 decoding is enabled when TEXT is turned on (either from the Setup Menu or directly with CC on the remote).
TIP: Set Text Mode to 1 only if text is offered in your video system.

25-I. FUNCTION PRE (Function Preview)
Set to 0 to suppress CHANNEL PREVIEW from the FUNCTION menu with some Pay-Per-View systems.

26-I. NOT USED

27-I. NOT USED

28-I. CH OVER RIDE (Channel Override)
When set to 1, the end user can select channels with either Channel Up/Down or by direct keypad entry. When set to 0, only those channels that are entered for scanning may be selected by direct keypad entry.
Note: If set to 0, Auto Program is locked; (as shown on Setup menu) channel search is not available.

29-I. OLD OCV (On Command Video™)
Set to 1 for operation with systems from On Command Corporation.

30-I. ACK MASK
M.P.I. Communication Parameter. Leave at default setting unless changed by Pay-Per-View provider.

31-I. POLL RATE
M.P.I. Communication Parameter. Leave at default setting unless changed by Pay-Per-View provider.

32-I. TIMING PULSE
M.P.I. Communication Parameter. Leave at default setting unless changed by Pay-Per-View provider.

33-I. NOT USED

34-I. CAMPORT ENABLE
Set to 1 to enable the front AUX (Camport) input. Set to 0 to disable front AUX input.

35-I. NOT USED

36-I. NOT USED

37-I. REAR Y-C EN. Rear S-Video Enable)
Set to 1 to enable the rear S-Video input.
Set to 0 to disable the rear S-Video input.

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Installer Menu

Detailed Descriptions for Installer Menu Items 38-I through 59-I

38-I. YPrPb EN. (Not available)
Set to 1 to enable rear Component Video input. Set to 0 to disable rear Component Video input.

39-I. REAR VIDEO EN. (Rear Video Enable)
Set to 1 to enable rear AUX (Video) input.
Set to 0 to disable rear AUX input.

40-I. AUTO CAMPORT
Set to 0 to display Camport in Source menu. Set to 1 to remove Camport from Source menu.
Note: If disabled, do not connect any jacks.

41-I. AUTO COMPPORT
Set to 0 to display 'Front Computer SVGA' in Source menu. Set to 1 to remove 'Front Computer SVGA' from Source menu.
Note: If disabled, do not connect any jacks.

42-I. NOT USED

43-I. NOT USED

44-I. NOT USED

45-I. NOT USED

46-I. STRT AUX SRCE (Starting Aux Source)
Sets the starting AUX source.

47-I. AUX STATUS
Set to 1 for M.P.I. AUX source to be reported as a channel number instead of channel 0. Set to 0 to disable AUX identification change.

48-I. DIS SETUP M (Disable Setup Menu)
Set to 1 to disable the Setup menu. Setup menu will not appear. Set to 0 to enable the Setup menu.

49-I. DIS AUDIO M (Disable Audio Menu)
Set to 1 to disable the Audio menu. Audio menu will not appear. Set to 0 to enable the Audio menu.

50-I. DIS VIDEO M (Disable Video Menu)
Set to 1 to disable the Video menu. Video menu will not appear. Set to 0 to enable the Video menu.

51-I. DIS VCHIP M (Disable V-Chip Menu)
Set to 1 to disable V-Chip menu. V-Chip menu will not appear. Set to 0 to enable the V-Chip menu.

52-I. DIS SOURCE M (Disable Source Menu)
Set to 1 to disable Source menu. Source menu will not appear. Set to 0 to enable the Source menu.

53-I. DIS CH-TIME (Disable Channel-Time OSD)
Set to 1 to disable the Channel-Time display. Channel-Time display will not appear.
Set to 0 to enable the Channel-Time display.

54-I. EN SET COL (Enable Setup Menu Color)
Set to 1 to enable custom color settings for the Setup menu. Set to 0 to disable custom color settings for the Setup menu.

55-I. FOR SETUP M (Setup Menu Foreground Color)
Set according to Color Chart.

0 = Black	3 = Yellow	6 = Cyan
1 = Red	4 = Blue	7 = White
2 = Green	5 = Violet	

56-I. BCK SETUP M (Setup Menu Background Color)

0 = Black	3 = Yellow	6 = Cyan
1 = Red	4 = Blue	7 = White
2 = Green	5 = Violet	

57-I. EN AUDIO COL (Enable Audio Menu Color)
Set to 1 to enable custom color settings for the Audio menu. Set to 0 to disable custom color settings for the Audio menu.

58-I. FOR AUDIO COL (Audio Menu Foreground Color)

0 = Black	3 = Yellow	6 = Cyan
1 = Red	4 = Blue	7 = White
2 = Green	5 = Violet	

59-I. BCK AUDIO COL (Audio Menu Background Color)

0 = Black	3 = Yellow	6 = Cyan
1 = Red	4 = Blue	7 = White
2 = Green	5 = Violet	

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60-I. EN VIDEO COL (Enable Video Menu Color)
Set to 1 to enable custom color settings for the Video menu. Set to 0 to disable custom color settings for the Video menu.

61-I. FOR VIDEO M (Video Menu Foreground Color)

0 = Black 3 = Yellow 6 = Cyan
1 = Red 4 = Blue 7 = White
2 = Green 5 = Violet

62-I. BCK VIDEO COL (Video Menu Background Color)

0 = Black 3 = Yellow 6 = Cyan
1 = Red 4 = Blue 7 = White
2 = Green 5 = Violet

63-I. EN PTL COL (Enable V-Chip Menu)
Set to 1 to enable custom color settings for the V-Chip menu. Set to 0 to disable custom color settings for the V-Chip menu.

64-I. FOR PTL M (V-Chip Menu Foreground Color)

0 = Black 3 = Yellow 6 = Cyan
1 = Red 4 = Blue 7 = White
2 = Green 5 = Violet

65-I. BCK PTL M (V-Chip Menu Background Color)

0 = Black 3 = Yellow 6 = Cyan
1 = Red 4 = Blue 7 = White
2 = Green 5 = Violet

66-I. EN SRC COL (Enable Source Menu Color)
Set to 1 to enable custom color for the Source menu. Set to 0 to disable custom color for the Source menu.

67-I. FOR SRC M (Source Menu Foreground Color)

0 = Black 3 = Yellow 6 = Cyan
1 = Red 4 = Blue 7 = White
2 = Green 5 = Violet

68-I. BCK SRC M (Source Menu Background Color)

0 = Black 3 = Yellow 6 = Cyan
1 = Red 4 = Blue 7 = White
2 = Green 5 = Violet

69-I. EN CH-T COL (Enable Ch-Time OSD Color)
Set to 1 to enable custom color for the Channel-Time display. Set to 0 to disable custom color for the Channel-Time display.

70-I. FOR CH-T COL (Channel-Time Display Foreground Color)

0 = Black 3 = Yellow 6 = Cyan
1 = Red 4 = Blue 7 = White
2 = Green 5 = Violet

Note: If foreground and background color are the same, menu background is transparent.

71-I. BCK CH-T COL (Channel-Time Display Background Color)

0 = Black 3 = Yellow 6 = Cyan
1 = Red 4 = Blue 7 = White
2 = Green 5 = Violet

Note: If foreground and background color are the same, menu background is transparent.

72-I. NOT USED

If set to 1 and Channel Override is set to 0, "NOT AVAILABLE" message is displayed when directly accessing a channel not in the favorite channel list. **(Applies to NTSC Channels Only.)**

74-I. CH-TIME SIZE
When set to 1 and transparent background is selected for Channel-Time display, (foreground color = background color and custom color enabled) a large channel number is displayed instead of the normal Channel-Time display.

75-I. NOT USED

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76-I. DEFEAT XDS
Set to 1 to disable XDS display. Set to 0 to enable XDS display. XDS data (provided at the discretion of the broadcaster), is available only on analog channels. After a channel change, wait 5 seconds then press ENTER to see XDS data, if available.

77-I. NOT USED

78-I. UPN MSB
User programmable number, most significant byte readable by M.P.I. command.

79-I. UPN MSB-1
User programmable number, most significant byte-1 readable by M.P.I. Command.

80-I. UPN MSB-2
User programmable number, most significant byte-2 readable by M.P.I. command.

81-I. UPN LSB
User programmable number, least significant byte readable by M.P.I. command.

82-I. CHKSM ERROR
Enforces rigid M.P.I checksum validation.
Set to 1 for validation.
Set to 0 to turn off.

83-I. HANDSHK TIME
Adds an additional delay to the handshake time which is 64 msec, thus relaxing M.P.I. timing requirements to be compatible with PC based Windows controlled systems, range is 0 - 5.
Set to 0 to retain standard 64 msec delay.
Set to 1 - 5 to increase @ 16 msec ea., the delay up to 144 msec.

84-I. PERMANENT BLK
Allows Parental Control blocking schemes to be permanent by removing the blocking hours function. Set to 1 to install Parental Control blocking restrictions permanently. Set to 0 for user-specified hours control of blocking schemes.

85-I. A MUTE TIME (Audio Mute Delay Time)
Controls audio muting delay time when switching between AUX sources. Range is 0 to 254 msec.

86-I. V MUTE TIME (Video Mute Delay Time)
Controls video muting delay time when switching between AUX sources. Range is 0 to 254 msec.

87-I. NOT USED

88-I. EN NOISE MUTE
When set to 1, the audio signal volume is limited to a minimum value while receiving no signal from the broadcaster.

89-I. POKE ENABLE
When set to 1, writing to Non-volatile Memory thru M.P.I. Is enabled.

90-I. KEY LOCK
When set to 1, all front keyboard functionality is disabled. When set to 0, keyboard is enabled.

91-I. NOT USED

92-I. NOT USED

93-I. NOT USED

94-I. NOT USED

95-I. AUDIO MD DISP
When set to 1, Audio Mode Information is enabled to appear as part of the Channel-Time Display.

96-I. NOT USED

97-I. NOT USED

98-I. NOT USED

99-I. NOT USED

100-I. ATSC TUNE MD (ATSC Tuning Mode)
Sets ATSC tuning mode. Set to 0 for virtual channel, set to 1 for physical channel.

101-I. STRT MINOR CH (Start Minor Channel)
Sets the starting minor digital channel number. For NTSC set at 0. Not 0, sets digital minor start channel number. Used with item 4-I Start Channel. Set the major channel number in 4-1 and the minor digital dash number in item 101-I. At TV turn On, start channel number is automatically tuned in. Set to 0 if item 4-I is set to 255 for last tuned channel.

102-I. NOT USED

103-I. A RATIO LOCK (Aspect Ratio Lock)
If set to 1, current picture aspect ratio is retained at power Off. At power On, previous aspect ratio will be used. If set to 0, resets aspect ratio to default setting at TV turn On.

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LT2002 QuickSet Programmer

Use the LT2002 QuickSet II "Clone" Programmer to copy the setup from a "master" TV then quickly transfer the setup to duplicate TVs; must be the same model number as the master TV.

THE CLONE HAS CONTROL OF THE TV

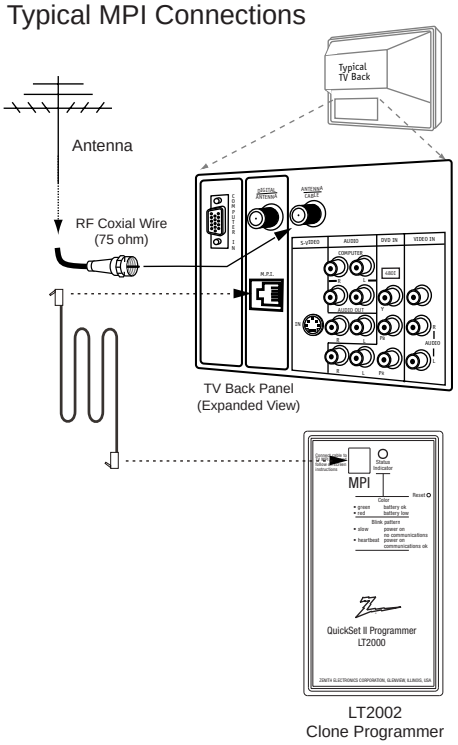
THE CLONE IS VERSION XX
THE TV IS VERSION XX
THE SW IS REVISION XX

CLONE CLOCK = XX:XX
TV CLOCK = XX:XX

-PRESS ANY KEY TO CONTINUE.

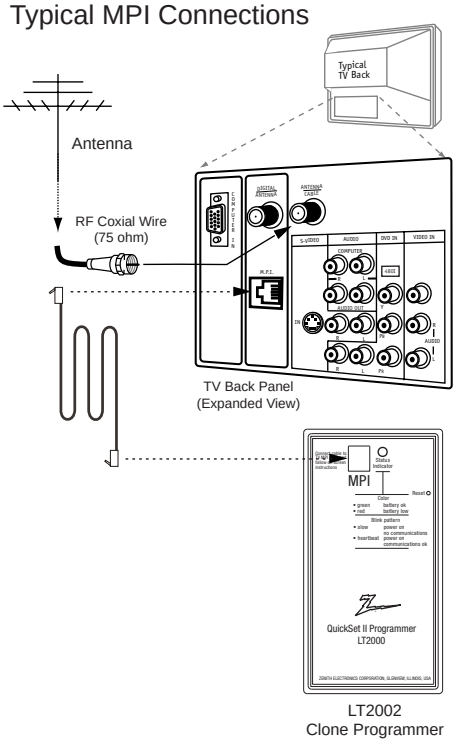
-DISCONNECT CLONE WHEN DONE.

Learn Master TV Setup
Typical MPI Connections



LT2002
Clone Programmer

Teach Other TV the Setup
Typical MPI Connections



LT2002
Clone Programmer

The optional QuickSet II Clone Programmer (LT2002) allows custom setup and programming information to be quickly copied from a master TV into multiple identical television sets. Once learned from the master, setup data is retained in the LT2002 for future use.

When using the LT2002, cloning operations will go easier if the TV set is connected to a good quality signal and operating with a stable picture displayed. To operate the LT2002, use the indicated keys on the HP602, LP702 or MBR3447 Zenith installer remotes, or the front panel keys on the TV receiver.

Notes: Use only one MPI port for cloning. Do not run Auto Program while cloning.

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Before You Begin Cloning...

• Do not use clone with any PPV card installed in TV or damage to clone will occur.

• Use MPI port for connecting to MPI equipment.

• Do not run Auto Prg. (Program) while TV is connected to clone programmer.

• The "Master TV" should be connected to a good, stable signal from an over-the-air antenna or cable service and turned On.

• Teaching and Learning is only possible between identical model Zenith TVs. (However, the Clone programmer can store 3 different master TV setups.)

WARNING: Copying a blank or incorrect memory into a TV will cause the TV to operate erratically or become inoperable.

• Use an Zenith MBR remote like the MBR3447 or the TV front panel controls to operate Learning and Teaching menus.

• Make sure that the batteries in the Clone programmer are fresh.

• If the batteries are removed, the Clone Clock time will be lost.

• Decide if you want to set the time from the Clone programmer or copy the time to the Clone programmer; from a TV which has the clock set to the current time.

• Follow the connection diagrams on the previous page to connect the Clone to a master TV and, after learning is complete, to another identical TV to "teach" it the master setup.

• Setting the time and transferring it to the Clone or another TV is a separate procedure.

• Once a TV's setup is copied to another TV, that TV needs to be disconnected from power for about 5 seconds to activate the newly copied setup.

• See Troubleshooting to solve problems.

A. Set Up a Master TV

Using an Zenith Multi-Brand remote like the MBR3447, set up a "Master" TV with custom settings and features as described in the TV's operating guide.

The master TV's Setup is what you will copy to the Clone Programmer and transfer to TVs with the same model number so they will operate identically.

B. Connect Clone to Master TV

If there is a good connection, the "Clone has Control of the TV" message will appear. (See menu on the previous page.)

A slow flashing green light indicates there is a problem with the communications between the TV and the programmer. In this case, check for a damaged cable, poor contacts or other connection troubles.

If the status indicator is red, the programmer batteries are low and should be replaced. Use 4 good-quality alkaline AA batteries.

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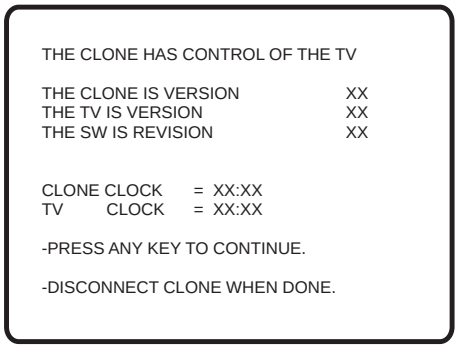
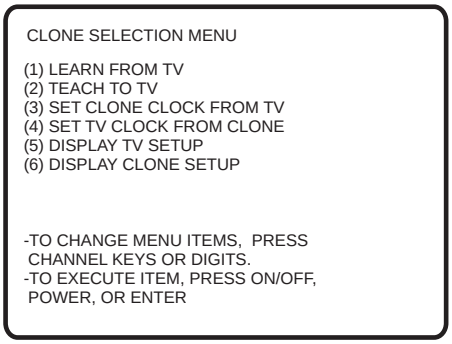
Cloning


THE CLONE HAS CONTROL OF THE TV
THE CLONE IS VERSION XX
THE TV IS VERSION XX
THE SW IS REVISION XX
CLONE CLOCK = XX:XX
TV CLOCK = XX:XX
-PRESS ANY KEY TO CONTINUE.
-DISCONNECT CLONE WHEN DONE.


CLONE SELECTION MENU
(1) LEARN FROM TV
(2) TEACH TO TV
(3) SET CLONE CLOCK FROM TV
(4) SET TV CLOCK FROM CLONE
(5) DISPLAY TV SETUP
(6) DISPLAY CLONE SETUP
-TO CHANGE MENU ITEMS, PRESS CHANNEL KEYS OR DIGITS.
-TO EXECUTE ITEM, PRESS ON/OFF, POWER, OR ENTER

C. Learn Setup from Master TV
Press 1 to select the "Learn From TV" option, then press ON/OFF, POWER, or ENTER to go to the Memory Bank Selection Menu. Pick the Memory "Bank" you want to store this Master TV's Setup in by pressing either Channel key repeatedly to pick Memory 1, 2 or 3. (If you choose a Memory "Bank" that already has a master TV's setup in it, it will be overwritten by this Master TV's setup.)

Once the Clone memory bank is selected, press ON/OFF, POWER or ENTER. The Clone memory bank you have selected will be shown. Press ON/OFF or POWER to begin copying the master TV's setup.

Ca. Set the Clock (Optional)
Set the time on the Master TV's Clock. (If the time has already been copied from another TV into the Clone programmer, you can set the Master TV's clock by copying the time from the Clone programmer.) The LT2002 Clone Programmer can copy the current time to both a master TV and to the Clone's internal clock; accurate to within one minute. (Another reason that the Clone programmer should be equipped with fresh, high-quality alkaline batteries is for it to keep the time as accurately as possible.)

Since the Clone Programmer's time cannot be set directly, the time needs to be copied from a Zenith TV equipped with M.P.I. Input capability.

Once the time is copied to the Clone programmer, the current time can then be transferred to another TV. (This can be a Master TV, or another TV which has already had the features set up.)

D. Teach Master TV's Setup to Another Identical TV
After Learning is complete, remove the M.P.I. cable from the master TV and connect it to the TV that you want to copy the master TV's setup to. With the "TV is Controlled by Clone" message displayed, press 2 or use either Channel key to go to the "Teach to TV" option, press ON/OFF, POWER or ENTER.

Follow on-screen instructions to transfer the Setup and other information to the "Learning" TV. After the "Teach to TV is Complete" message is displayed, press any key to return to the Clone menus option, then press ON/OFF, POWER or ENTER. If finished, remove the M.P.I. Cable from the TV.

E. Disconnect TV Power for 5 Seconds
Unplug the TV power cord of the newly "Cloned TV" from the power outlet for about 5 seconds to activate the newly copied Setup.

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Cloning Operation Notes

Disconnect the Clone from the TV when you are finished; automatically switching it Off. The real-time clock continues to run after the main circuits have been switched off.

Reset Clone After Static Shock

After replacing exhausted batteries, or if the programmer behaves strangely after a static shock, use a paper clip or similar instrument inserted through the small hole marked "RESET" to activate the internal reset switch and restore normal operation.

After a reset, check the real-time clock setting. It may be necessary to reset the Clone Programmer clock from a TV containing the correct time.

The LT2002 programmer is designed to be used with TVs containing the 221-01006 and later processors. Use with earlier TV sets may give unpredictable results. The specific microprocessor used in any TV set may be determined by activating the Installer Menu. The microprocessor part number appears on the screen when the Installer Menu is activated. Processors before the 221-01006-04 have a limited screen display capability. They can not display entire screens as shown in the quick setup instructions accompanying the LT2002 clone programmer. Use the printed menu illustrations on the quick setup sheet supplied with the Clone as an aid to making your programming choices. (Although the menus are not all displayed, the clone functions all operate normally).

Clone Programmer/Cloning Procedure Troubleshooting

Problem	Possible Cause(s)	Possible Solution(s)
Clone Programmer		
LED does not blink.	• M.P.I. cord not connected. • TV not turned On. • Weak batteries.	-Connect M.P.I. cord. -TV must be On for clone to work. -Install 4 fresh AA high-quality alkaline batteries.
Clone menu hard to read.	• Weak signal.	-Connect TV to a reliable signal Source.
No time set.	• No time on Master TV.	-Set time on master TV, copy time to Clone Programmer.
Menu items 7-8 not on clone selection menu.	• Not necessary.	-Channel Labels already cloned; if they were on Master TV.
Master and Other TVs		
Cloning did not work.	• Procedure interrupted. • Different TV models.	-Wait until procedure complete message is displayed. -Cloning is only possible with identical model Zenith TVs.
Clone time disappeared.	• Batteries were removed.	-Batteries must remain installed to retain time settings.
Channel Labels not present on cloned TV.	• Saved to other memory.	-Must save channel labels to same memory bank as master TV setup.
New Setup not present.	• TV not reset.	-Disconnect newly-cloned TV from power for 5 seconds.

When cloning operations are complete, just unplug the LT2002 from the TV.

If the TV does not display a picture (blank screen) after a few seconds, just change channels.

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Remote Control Device Programming

Program the remote to operate a variety of Audio/Video devices

1 The device you want to program should be turned On.

2 Refer to the brand programming codes on pages 63 - 67 to find the type of product and brand name of the device you're programming. Write down the three-number codes.

3 Press and hold the PRG key. (It's recessed so it doesn't get pushed accidentally.) When the Red LED (indicator light) turns On, release the key.

4 Press the key with the name of the device you're programming (VCR, CABLE, AUX, TV). Red LED blinks.

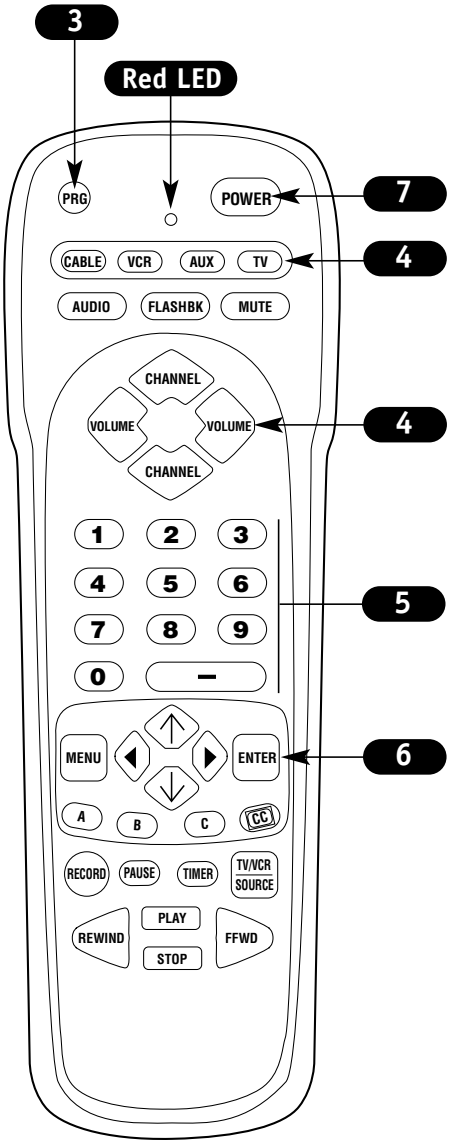
5 Using the NUMBER keypad, enter the three-number code found on the charts on pages 63 - 67. Red LED blinks.

6 Press ENTER to save the code The Red LED indicator light will blink two times and turn Off if the code was accepted.

7 Point the remote at the device and push the POWER key. The device should turn Off. If not, try the other codes listed and continue from Step 3.

Programming the Zenith remote will allow you to use one remote to work up to 4 different devices, if all remote operating modes are programmed!

Not all devices are controllable by your Zenith remote.



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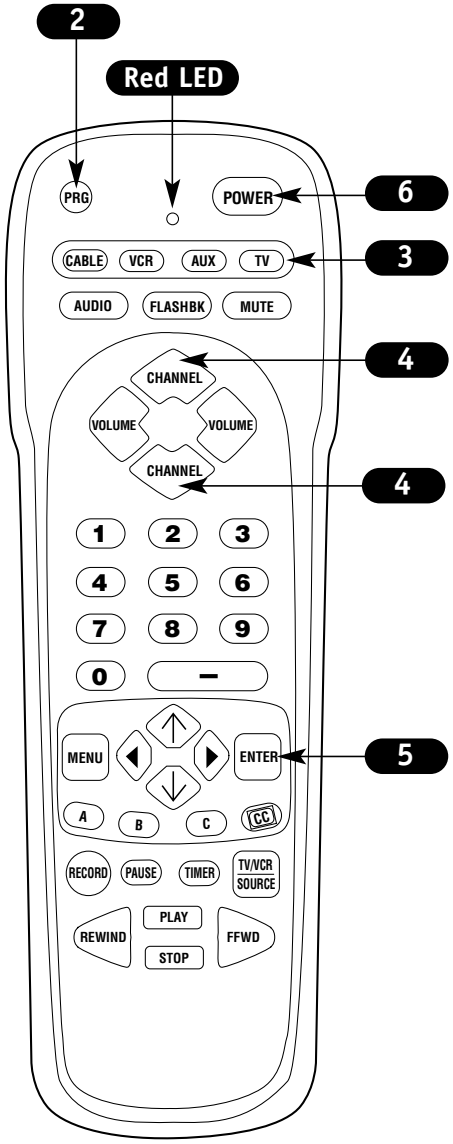
Remote Control Auto Find

If Programming the Remote did not find the code, try this procedure to automatically find the code for the device. If the remote becomes inoperable, go back to "Programming The Remote" and enter the Zenith TV code for Step 5, see page 60.



1 Turn the device On you're programming the remote control to operate.

2 Press and hold the PRG key 2.5 seconds until the Red LED indicator light stays on.

3 Press the key for the device you're trying to program (CABLE, VCR, AUX, TV). Red LED will blink.

4 Press Channel Up or Channel Down to send a power On/Off code. Red LED will blink with each press. Repeat until the device turns Off. (This is a trial and error process, so it may be necessary to repeat these steps until the remote finds the code.)

5 Press ENTER to save the code. Red LED will blink twice and exit search mode.

6 Press POWER to turn the device back on.

You can quickly get out of Auto Find by pressing QUIT.

If the indicator light stays On while you push Power, instead of turning Off, all the codes have been tried and the device can't be programmed.

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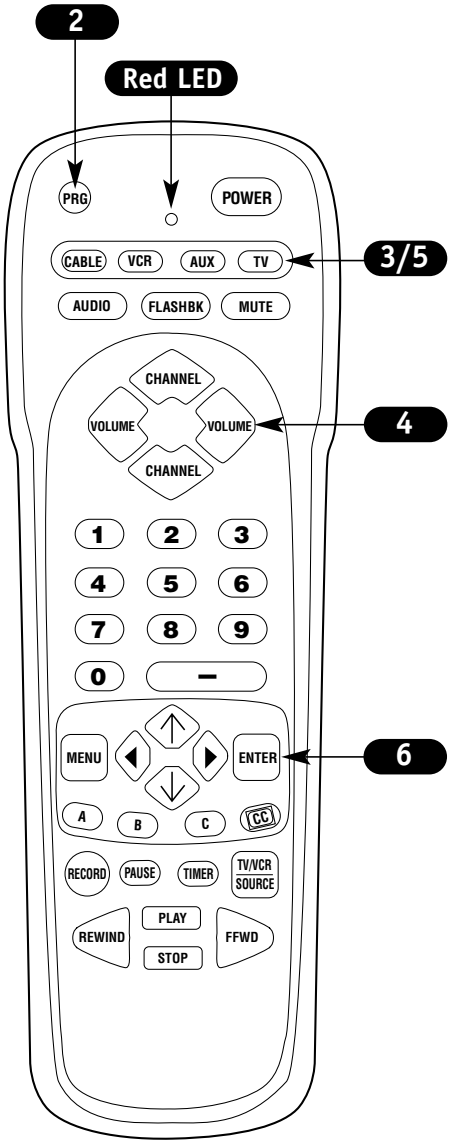
Remote Control Amplifier Volume Override Setup

Set up the TV/amplifier/device sound output to be controlled in other remote control modes. For example, in VCR mode, sound is heard on TV. In Aux mode, Aux sound is heard on Aux device. In Cable mode, you may elect to have the cable box sound heard on the TV or other audio device.



1. Find the code that operates your amplifier / device. Test it to make sure it's the correct one by following the procedure in "Programming The Remote".

2. Press and hold PRG on your remote until the Red LED indicator light stays on, then release it.

3. Press the mode key to select the new output for the sound. Red LED blinks once.

4. Press the Volume + key. Red LED blinks once.

5. Press the mode key you want to change the output to the device selected in step 3. Red LED blinks once.

6. Press ENTER when finished. Red LED blinks twice.

Example Audio Source Outputs

Remote Mode		*Default Audio Output*
TV	=	*TV*
VCR	=	*TV*
Aux	=	*Aux*
Cable	=	*Cable*

Example sound output to an audio amplifier

TV	=	*Aux*
VCR	=	*Aux*
Aux	=	*Aux*
Cable	=	*Aux*

To put everything back to normal, reprogram all modes with their original codes (see "Programming The Remote" on page 60).

If you can't find the code for the amplifier, use the Auto Find feature on page 61.

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Remote Control Brand Programming Codes

Find the device codes you need to program the remote.
On this page: TVs and VCRs

TVs

Goldstar 004 102 106 110 112 113 116 119 122 127 137 143

LG 255

Zenith 001 072 073 095 103 157

VCRs

AIWA 034

AKAI. 016 043 046 124 125 146

AMPRO 072

ANAM 031 033 103

AUDIO DYNAMICS. 012 023 039 043

BROKSONIC. 035 037 129

CANON. 028 031 033

CAPEHART 108

CRAIG 003 040 135

CURTIS MATHES . . 031 033 041

DAEWOO 005 007 010 064 065 108 110 111 112 116 117 119

DAYTRON 108

DBX 012 023 039 043

DYNATECH 034 053

ELECTROHOME . . . 059

EMERSON 006 017 025 027 029 031 034 035 036 037 046 101 129 131 138 153

FISHER 003 008 009 010

FUNAI. 034

GE 031 033 063 072 107 109 144 147

GO VIDEO. 132 136

GOLDSTAR 012 013 020 101 106 114 123

HARMAN KARDON 012 045

HITACHI. 004 018 026 034 043 063 137 150

INSTANTREPLAY . . 031 033

JCL. 031 033

JCPENNY 012 013 015 033 040 066 101

JENSEN 043

JVC. 012 031 033 043 048 050 055 060 130 150 152

KENWOOD. 014 034 039 043 047 048

LG 154

LLOYD 034

LXI. 003 009 013 014 017 034 101 106

MAGIN. 040

MAGNAVOX 031 033 034 041 067 068

MARANTZ 012 031 033 067 069

MARTA. 101

MATSUI 027 030

MEI 031 033

MEMOREX. 003 010 014 031 033 034 053 072 101 102 134 139

MGA 045 046 059

MINOLTA 013 020

MITSUBISHI 013 020 045 046 049 051 059 061 151

MTC 034 040

MULTITECH. 024 034

NEC 012 023 039 043 048

NORDMENDE 043

OPTONICA. 053 054

PANASONIC. 066 070 074 083 133 140 145

PENTAX 013 020 031 033 063

PHILCO 031 034 067

PHILIPS. 031 033 034 054 067 071 101

PILOT 101

PIONEER 013 021 048

PORTLAND 108

PULSAR 072

QUARTZ 011 014

QUASAR. 033 066 075 145

RCA 013 020 033 034 040 041 062 063 107 109 140 144 145 147

REALISTIC 003 008 010 014 031 033 034 040 053 054 101224 225 229

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Remote Control Brand Programming Codes

Find the device codes you need to program the remote.
On this page: TVs and VCRs

VCRs Continued

RICO 058

RUNCO 148

SALORA 014

SAMSUNG 032 040 102 104 105 107 109 112 113 115 120 122 125

SANSUI 022 043 048 135

SANYO 003 007 010 014 102 134

SCOTT 017 037 112 129 131

SEARS 003 008 009 010 013 014 017 020 031 042 073 081 101

SHARP 031 054 149

SHINTOM 024

SONY 003 009 031 052 056 057 058 076 077 078 149

SOUNDESIGN . . . 034

STS 013

SYLVANIA 031 033 034 059 067

SYMPHONIC 034

TANDY 010 034

TATUNG 039 043

TEAC 034 039 043

TECHNICS 031 033 070

TEKNIKA 019 031 033 034 101

THOMAS 034

TMK 006

TOSHIBA 008 013 042 047 059 082 112 131

TOTEVISION 040 101

UNITECH 040

VECTOR RESEARCH 012

VICTOR 048

VIDEO CONCEPTS . 012 034 046

VIDEOSONIC 040

WARDS 003 013 017 024 031 033 034 040 053 054 131

YAMAHA 012 034 039 043

ZENITH 001 034 048 056 058 072 080 101

VCRs-DVDs

APEX DIGITAL . . . 222

COBY. 234

DENON. 220 214

GE 205 206

GOLDSTAR. 210 216 225

GO VIDEO 228 229 230

HARMAN KARDON. 227

ILO 239

JVC. 212

KISS 242

LG 201 210 216 225

LITEON 235 236

MAGNAVOX 213

MALATA 238

MARANTZ 224

MITSUBISHI 202

NAD 223

ONKYO. 208 217

OPPO. 237

PANASONIC. 203 209

PHILIPS. 213

PIONEER. 204 226

POLAROID. 231 232 233

PROCEED 221

PROSCAN 205 206

RCA. 205 206

RJTECH 240

SAMSUNG 211 215

SENSORY SCIENCE. 230

SONY. 207

TEAC 241

THOMPSON 205 206

TOSHIBA 219 208

YAMAHA. 209 218

ZENITH 210 216 225

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Remote Control Brand Programming Codes

Find the device codes you need to program the remote.
On this page: Cable Boxes

Cable

ABC 003 004 039 042 046 052 053

ANTRONIK 014

ARCHER 005 007 014 024

CABLE STAR 026

CENTURION 092

CENTURY 007

CITIZEN 007

COLOUR VOICE . . 065 090

COMBANO 080 081

COMTRONICS . . . 019 030

DIAMOND 023

EAGLE 020 030 040

EASTERN 057 062 066

ELECTRICORD . . . 032

GE 072

GEMINI 008 022 025 054

GI 052 074

GOLDEN CHANNEL 030

HAMLIN 049 050 055

HITACHI 052 055

HOSPITALITY . . . 070 077

JERROLD 002 003 004 008 009 010 052 069 074

LG 058 101

M-NET 037

MACOM 033

MAGNAVOX 010 012 064 079

MEMOREX 001

MOTOROLA 103 104

MOVIE TIME 028 032

MOXI 105

NSC 015 028 038 071 073

OAK 016 031 037 053

PANASONIC 044 047

PARAGON 001

PHILIPS 006 012 013 020 065 085 090

PIONEER 034 051 052 063 076

POST NEWS WEEK 016

PRUCER 059

PTS 011 048 071 072 073 074

PULSAR 001

RCA 047

REGAL 049 050

REGENCY 057

REMBRANT 025

RK 091

SAMSUNG 030 061 068 083

SCIENTIFIC ATLANTA 003 011 041 042 043 045 046 102

SHERITECH 022

SIGNAL 030

SIGNATURE 052

SL MARX 030

SPRUCER 047 078

STARCOM 002 004 008 009

STARGATE 008 030

SYLVANIA 067

TADIRAN 030

TANDY 017

TEXSCAN 029 067

TOCOM 039 040 056

TOSHIBA 001

UNIKA 007 014 024

UNITED CABLE . . 004 053

UNIVERSAL 005 007 014 024 026 027 032 035

VIEWSTAR 012 015 018 086 087 088 089

ZENITH 001 021 060 093

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Remote Control Brand Programming Codes

Find the device codes you need to program the remote.
On this page: Cable Satellite Receivers

Cable-Satellite

ALPHASTAR DSR . 233

AMPLICA 160

BIRDVIEW 161 236 239

BSR 163

CAPETRONICS . . . 163

CHANNEL MASTER 123 124 125 128 146 165

CHAPARRAL 118 119 122 187

CITOH 164

CURTIS MATHES . 160 228

DIRECTV 254

DRAKE 115 116 117 120 121 162 222 226 183

DX ANTENNA . . . 134 156 166 186

ECHOSTAR 148 150 167 168 203 204 205 206 207 208 209 210 232

ELECTRO HOME . . 199

EUROPLUS 224

FUJITSU 127 131 132 137 243 244

GENERAL INSTRUMENT 113 114 126 139 141 169 211

HITACHI 144 177

HOUSTON TRACKER 143 147 149 161 167 214

HUGHES 178

HYTEK 163

JANIEL 170 241

JERROLD 171

KATHREIN 218

LEGEND 167

LG 249 251 253

LUTRON 242

LUXOR 172 223

MACOM 120 169 173 174 175

MEMOREX 167

NEXTWAVE 138 234 235

MOTOROLA 109

NORSAT 179 180

PACE SKY SATELLITE 219

PANASONIC 170 202

PANSAT 231

PERSONAL CABLE 227

PHILIPS 181

PICO 215

PRESIDENT 129 212

PRIMESTAR 140 220 221

PROSAT 182

RCA 176 216

REALISTIC 153 184

SAMSUNG 233 252 255

SATELLITE SERVICE CO 138 145 157 167 195

SCIENTIFIC ATLANTA 142 248

SONY 213

STARCAST 151

SUPER GUIDE . . . 130 234 235

TEECOM 133 136 185 197 198 200 217 240 247

TOSHIBA 110 112 237

UNIDEN 126 135 152 153 154 155 158 159 188 189 190 196 211 245 246

VIEWSTAR 225

VOOM 109

WINEGARD 238 229

ZENITH 111 191 192 193 194 201 230 251

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Remote Control Brand Programming Codes

Find the device codes you need to program the remote.
On this page: Audio Devices, CD Players

Aux (Audio)

GOLDSTAR 005

HITACHI 010

JVC 006 039 049 050

KENWOOD 001 013 029 031 044

LUXMAN 017

MARANTZ 002 021 028 030 032 035

NAD 014

NAKAMICHI 051 052

ONKYO 008 009 025 040 041

OPTIMUS 011 013 022

PANASONIC 003 015 036 046

PIONEER 007 016 020 023 024 026 033 037 047

QUASAR 003 036

RCA 004

SHARP 013 029 043 045

SHERWOOD 012 019

SONY 027 034 038 048 053 054

SOUNDESIGN . . . 018

TOSHIBA 042

VICTOR 006 039

Aux (CD)

ADC 104

AIWA 149 178 189 202 212

AKAI 134 165 200

DENON 101 190 221 222 223

EMERSON 133 136 152 166 175

FISHER 113 122 138 140 168

GE 209

HITACHI 133 166

JVC 117 196 227 228

KENWOOD 105 110 113 118 144 154 155 198 200 216 217

LUXMAN 108 123 153 173

MAGNAVOX 127 135 172 179 180

MARANTZ 129 135 141 159 224 225 226

MCS 111 147 156 169

MITSUBISHI 120 179 229 230 231

ONKYO 125 126 130 131 213 215 232

OPTIMUS 100 107 110 124 139 140 145 146 162 163 164 165 170

PANASONIC 106 151 176 184 203 219 233

PHILIPS 127 135 195 199 237

PIONEER 107 124 167 171 179 187 191 205 206 207

QUASAR 106 176

RADIO SHACK . . . 186 188

RCA 114 133 157 166

SANYO 121 140 158 168

SEARS 147

SHARP 110 141 150 181 200 204 210 217

SHERWOOD 102 115 116 128 141 193

SONY 100 142 168 174 182 183 192 208 234 235 236

TECHNICS 106 148 151 176 184 203 214 218

TEAC 103 112 132 141 160 161 177 185 197 201

YAMAHA 109 119 137 143 194 211

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Remote Control Mode Key Functions

Remote Control default key functions by remote operating mode

Key Name	TV Mode Zenith 001	VCR Mode Code 225		Cable Mode Code 102		AUX Mode Code 054	
VCR	**DVD**	**CABLE**	**SAT**	**AUDIO**	**CD**		
POWER	POWER	POWER	POWER	POWER	POWER	POWER	POWER
AUDIO	EXIT	QUIT	CLEAR	CANCEL	EXIT		
FLASHBK	PIP POSITION	Q_VIEW	RETURN	FLASHBK	FLASHBK		
MUTE	MUTE	MUTE	MUTE	MUTE	MUTE	MUTE	MUTE
VOL+	VOL+	VOL+	VOL+	VOL+	VOL+	VOL+	VOL+
VOL-	VOL-	VOL-	VOL-	VOL-	VOL-	VOL-	VOL-
CH+	CH+	CH+	SKIP >>	CH+	CH+	PRESET+	SKIP >>
CH-	CH-	CH-	SKIP <<	CH-	CH-	PRESET -	SKIP <<
1	1	1	1	1	1		
2	2	2	2	2	2		
3	3	3	3	3	3		
4	4	4	4	4	4		
5	5	5	5	5	5		
6	6	6	6	6	6		
7	7	7	7	7	7		
8	8	8	8	8	8		
9	9	9	9	9	9		
0	0	0	0	0	0		
- (DASH)	100	100					
MENU	MENU	MENU	MENU	MENU	MENU		
ENTER	ENTER/SELECT	ENTER	ENTER	ENTER	ENTER		
UP	SEL UP	SEL UP	UP	UP	UP		
DOWN	SEL DN	SEL DN	DOWN	DOWN	DOWN		
LEFT ADJ	LFT ADJ	LEFT	LEFT	LEFT	LEFT		
RIGHT	ADJ RT	ADJ RT	RIGHT	RIGHT	RIGHT		
A	PIP SWAP						
B	GUIDE	GUIDE	GUIDE	GUIDE			
C	HELP	SUBTITLE	HELP	HELP			
CC	CC, PIP ON/OFF		MARKER				
TIMER	RECALL	INFO/DISP					
TV/VCR SOURCE	TV/VCR	TV/VCR					
RECORD	REC(VCR)	REC	OPEN/CLOSE	BUY			
PAUSE	PAUSE(VCR	PAUSE	PAUSE				PAUSE
REWIND	REW(VCR)	REW	REW				REW
FFWD	FF(VCR)	FF	FF				FF
PLAY	PLAY(VCR)	PLAY	PLAY				PLAY
STOP	STOP(VCR)	STOP	STOP				STOP

Reference: 6710V00121D 4/06

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Troubleshooting

Some Quick and Easy Tips for Resolving Problems

Installer Menu Settings and TV Problems

Installer menu item settings dictate how the TV functions. If a feature is not available or a problem can not be solved, check the installer menu settings to assure feature and functional items are set to appropriate levels, etc.

Symptom(s)	Possible Cause(s)	Possible Solution(s)	Page(s)
Power			
No Power.	• AC Power Cord not connected or power outlet doesn't work.	Connect power cord. Try a different power outlet. Local power failure?	6
No Source image.	• Source turned Off.	Turn source equipment On.	
	• Source not selected.	Select source.	24
Remote Control Problems			
Remote doesn't work.	• Remote not in TV mode.	Put remote into TV mode.	25
	• TV software functioning.	Wait until software function is complete.	
	• Not aimed at remote sensor.	Point remote at TV Front Control Panel.	24
	• Remote too far from TV or IR path to TV obstructed.	Move remote closer to TV or darken room. Remove obstructions.	
	• Weak batteries.	Replace batteries.	6
	• Wrong battery polarity.	Check that "+" and "-" match in battery compartment.	6
	• Too much light in room.	Dim room light.	
Caption/Text Problems			
Picture has a big black box on it, but the sound is okay.	• Caption/Text mode turned On.	The CC (closed captions) option may be in Text 1, 2, 3, or 4 mode. Select Caption 1, or OFF in the Caption/Text menu.	36 - 37
No Closed Captions or Text.	• Not available on program. • Not provided by broadcaster. (Even though CC indicated on OSD)	Check local TV listings to see if available on broadcast. Relocate over-the-air antenna. Try a different channel with Closed Captions or Text.	37
	• Not turned On.	Pick a Closed Caption or Text option and turn Captions On.	
Captions appear when sound is muted.	• CC on Mute selected.	Set Captions option to Off.	30
Channel-Time Display for Analog/Digital Channels Problems			
Time on Analog-Digital OSDs is not the same.	• Automatic selected for Time Zone on Clock menu.	Select your local time zone in Time Zone menu to match clock time on analog and digital Ch-Time OSDs. Note: Analog and digital time OSDs may be a few minutes off. e.g. Analog = 4:10 p.m. Digital = 4:13 p.m.	30
Ch Preview Problems			
Ch preview menu does not appear when Audio on remote is pressed.	• Digital channel tuned in.	Ch Preview only works on analog channels and Aux.	25

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Troubleshooting

Some Quick and Easy Tips for Resolving Problems

Symptoms	Possible Cause(s)	Possible Solution(s)	Page(s)
Picture Reception			
Poor or no picture.	• TV station problems.	Try a different channel.	24/25
	• Video menu not adjusted properly.	Check Video menu option settings.	42
Local interference.	• Check for disturbing source.	The following may cause image problems or distortion: Electrical appliances, powerful lights, cars, trucks; computers or portable phones; medical equipment.	
	• Appliance too close to TV.	If possible increase the distance between the TV and the offending appliance. Or shut one of them off.	
Poor or no color.	• Sub-standard broadcast.	Try a different channel.	24/25
	• Sub-standard cable signal.	Notify cable company of reception problem. If a VCR is connected, play a tape.	
Picture wobbles or drifts.	• RF not connected, loose. • Local interference.	Make or tighten connection. Try different channel. Turn off interfering appliance.	15 24/25
	• Scrambled CATV channel.	Tune to unscrambled channel.	24/25
No CATV reception.	• Cable not connected.	Connect cable to Antenna/Cable (RF) jack.	15
	• Cable service interrupted.	Contact cable service.	
	• Antenna set, not CATV.	Select 'Cable TV' in Setup menu, run Auto Program.	26
Normal picture, poor or no sound.	• Audio muted.	Press MUTE or volume right key to increase sound level.	8/9
	• Broadcast problem.	Try a different channel.	24/25
	• A/V cables incorrectly connected.	Install A/V cables correctly.	18/19/20/21/22
	• Audio Out cable wrong.	Install Matrix Out external amplifier/speaker cable correctly.	22
	• Front Surround turned Off.	Turn Front Surround On in the Audio menu.	40/41
	• No 2nd Audio/ SAP on program.	Choose another audio mode option or a different program.	40/41
Snowy or Poor Picture.	• Wrong Ant. connection/location. • TV/VCR button set wrong.	Move antenna, check connection/location. Set TV/VCR button on VCR correctly.	18/19/20/21
	• Wrong output channel selected.	Set output channels on all A/V equipment to same channel (3 or 4).	18 - 21
	• Loose connection.	Check that all connections are correct.	15 - 23
	• Broadcast problem.	Try another channel.	24/25
	• Video menu options set wrong.	Check Video menu brightness controls.	42
TV turns Off.	• Sleep Timer turned TV Off.	Turn TV back On.	24/25
	• Off Timer turned TV Off.	Turn TV back On.	24/25
	• Power failure.	Check other power outlets.	
	• Power outlet controlled by switch. (Switch turned off.)	Connect TV power cord to outlet that is not controlled by a switch.	
TV turns On.	• On Timer turned TV On.	Disable On/Off Timer.	35
TV does not turn On/Off per On/Off Timer settings.	• On/Off Timer option disabled.	Go to Timer option in Setup menu and enable On/Off Timer.	35

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Troubleshooting

Some Quick and Easy Tips for Resolving Problems

Symptoms	Possible Cause(s)	Possible Solution(s)	Page(s)
Source Selection / Source Image Problems			
Camport (Front Audio/Video) source not selectable.	• Equipment not connected.	Connect Audio/Video equipment to front Audio/Video.	24
No Camport image. (Front Video)	• Equipment not turned On. • Not enabled.	Turn on equipment connected to front Video input. Enable Camport in Installer menu.	23 48
S- Video Source not selectable.	• Camport (Front Video) connected.	Disconnect equipment connected to front Video jack.	20
	• Not connected.	Connect S-Video equipment to S-Video In.	15
No S-Video image.	• Equipment not turned On.	Turn on equipment connected to S-Video In.	
No S-Video audio.	• S-Video audio not connected.	Connect audio for S-Video to Audio In R - L. (Use Audio In Left jack to connect only one audio wire.)	15
Antenna/Cable not selectable.	• Front Video connected. • S-Video equipment connected.	Disconnect equipment connected to front Video. Disconnect S-Video equipment from rear jack panel.	24 20
No Antenna Cable image.	• Not Connected.	Connect over-the-air antenna or cable service wire to Antenna/Cable jack.	15
Rear Audio Video not selectable.	• Front Video connected. • S-Video equipment connected.	Disconnect equipment from front Video jack. Disconnect S-Video equipment from rear jack panel.	24 20
		Go to Setup menu, select Add/Del/Bk option. Press MENU select “Added" in Add/Del/Bk option in Setup menu. (See Installer menus.)	31
No rear Audio Video image.	• Equipment not turned On.	Turn On equipment connected to rear Audio/Video.	
	• Equipment not connected.	Connect equipment to rear Audio/Video.	15

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Troubleshooting/Maintenance

Some Quick and Easy Tips for Resolving Problems

Symptom(s)	Possible Cause(s)	Possible Solution(s)	Page(s)
Parental Control Problems			
Guest has left Parental Control active, password is not known.	• Parental Control needs to be reset.	Press and hold down MENU key until menu disappears. Key in 9-8-7-6 and press CC. (For this to work, Installer menu item 0-1 Installer Seq needs to be set to 0.)	43 47
Protected/blocked message shows on-screen.	• Program content is restricted.	Key-in password and turn Lock On/Off (restrictions) Off. Set to Off in Lock On/Off menu.	43 - 46
	• Don't know password.	Tune to channel without Parental Control "Content" restrictions. Wait until restriction time expires.	24/25
TV - PG programs blocked.	• TV - PG set to be blocked.	Reset restrictions to PG - 13 so TV - PG programs will appear.	43 - 46
Foul language is heard.	• Foul language not blocked.	Restrict Language in Content options on Parental Control menu.	43 - 46
	• Program is not rated.	Restrict or block programs with no ratings.	43 - 46

Maintenance

Routine TV Cabinet and Screen Cleaning

Careful and regular cleaning can extend the the useful service life of the TV. Be sure to turn the power off and pull out the power cord before you begin any cleaning.

Screen Cleaning

1. Here's a great way to keep the dust off the screen for a while. Wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing detergent. Wring the cloth until it's almost dry, and then use it to wipe the screen.
2. Make sure the excess water is off the screen, and then let it air-dry before turning it on.

Cabinet Cleaning

1. Use a soft cloth with a mild soap solution to wipe the cabinet. (Avoid using any harsh, industrial strength variety of cleaner.)
2. Rinse the cloth and wipe the cabinet again.
3. Let the cabinet air-dry before turning the TV on.

Extended Absence

If the TV will be dormant for a long time, it's a good idea to unplug the power to protect against possible damage from lightning or power surges. If you use an off-air antenna, you may also want to disconnect it from the back of the TV.

If you unplug the TV, you may have to reset the clock using the Clock Set menu described earlier. See page 34.

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Discrete IR Command Codes

A list of the IR discrete codes available and their functions for this TV

Code (Hexa)	Function	Description
C4	Power On	Turns TV power on.
C5	Power Off	Turns TV power off.
D6	TV	Selects TV input.
5A	Camport	Selects Camport Source.
D1	R S-Video	Selects Rear S-Video Source.

Remote Control IR Codes

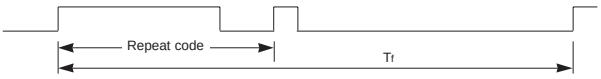
► Output waveform
Single pulse, modulated with 37.917KHz signal at 455KHz

► Configuration of frame

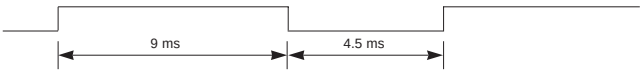
• 1st frame

Lead code
Low custom code
High custom code
Data code
Data code
C0 C1 C2 C3 C4 C5 C6 C7 C0 C1 C2 C3 C4 C5 C6 C7 D0 D1 D2 D3 D4 D5 D6 D7 D0 D1 D2 D3 D4 D5 D6 D7

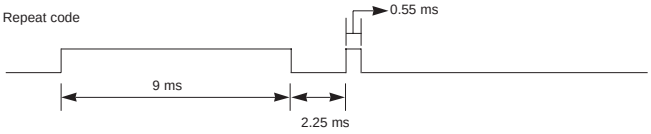
• Repeat frame



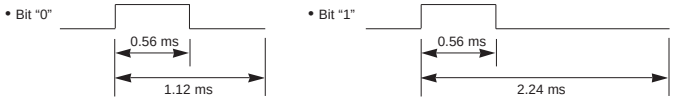
► Lead code



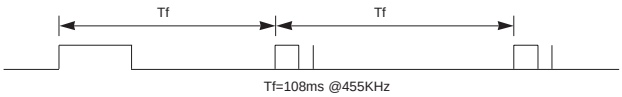
► Repeat code



► Bit description



► Frame interval : Tf
The waveform is transmitted as long as a key is depressed.



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Glossary

A list of definitions for some of the words found in this guide

75 OHM RF CABLE	The wire that comes from an off-air antenna or cable service provider. The end looks like a hex-shaped nut with a wire sticking through the middle. It screws onto the threaded jack on the back of the TV.
300 TO 75 OHM ADAPTER	A small device that connects a two-wire 300 ohm antenna to a 75 ohm RF jack. They are usually about an inch long with two screws on one end and a round opening with a wire sticking out on the other end.
A/V CABLES	Audio/Video cables. Three cables bunched together—right audio (red), left audio (white), and video (yellow). A/V cables are used for stereo playback of videocassettes and for higher quality picture and sound from other A/V devices.
A/V DEVICE	Any device that produces video or sound (VCR, DVD, cable box, or television).
ADDED	Lets you add new channels to the list that the user can scroll through using CH (Channel) Up/Down.
AMPLIFIER	An electronic device that amplifies sound from a television, CD player, VCR, DVD, or other Audio/Video device.
ANTENNA	The physical receiver of television signals sent over the air. A large metal piece of equipment does not always have to be visible to be using an antenna.
AUTO PROGRAM	Auto Program has the TV automatically find all the channels available.
BLANK	Channels that are Blanked will not have Video (shows a blank screen) only audio, if present on channel. (Not available on digital channels.)
DELETED	Lets you remove channels from the list that the user will scroll through using CH (Channel) Up/Down.
DIGITAL TUNER	Receives a digital signal and turns it into picture and sound.
INPUT	Refers to an input jack that receives a signal from a TV, VCR, or other Audio/Video device.
JACK	A connection on the back of a TV, VCR, or other Audio/Video device.
MONO SOUND	Mono (monaural) sound is one channel of sound. On more than one speaker, all the speakers play the same audio.
M.P.I. RJ11	Multiple Protocol Interface: ZENITH protocol for external control of TV through (M.P.I.) input jack on TV connections panel. (M.P.I. jack is used for cloning TV's features.)
OUTPUT	Refers to the output jack that sends a signal out of a VCR, DVD, or other A/V device.
2ND AUDIO PROGRAMMING SAP	Second Audio Programming (SAP) is another separate audio channel available with some programming. Choosing SAP often refers to listening to audio in another language, such as Spanish or French.
S-VIDEO	Provides higher-quality picture and sound. (S-Video is also referred to as "Y-C".)
SIGNAL	Picture and sound traveling through a cable, or over the air, to the television.
STEREO SOUND	Stereo (Stereophonic) sound refers to audio that's divided into right and left sides.
TUNER	Device that picks up the broadcast signal and turns it into picture and sound.
XDS	Extended Data Service: Additional program information included on the signal provided at the discretion of the broadcaster.

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Notes

Write down any special considerations/comments regarding your installation

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Zenith Direct-View TV Warranty

Direct-View Color TV

Welcome to the LG family! We believe that you will be pleased with your new Zenith TV. Please read this warranty carefully, it is a "LIMITED WARRANTY" as defined under Federal Law. This warranty gives you specific legal rights, and you may also have other rights that vary from state-to-state within the U.S.A.

LG'S RESPONSIBILITY

Service Labor

During a period of one year from effective warranty date, LG will provide service labor by an LG authorized service center when needed, as determined by the LG service center, as a result of manufacturing defects.

Parts

New or remanufactured replacements for factory-defective parts will be supplied by an LG authorized service center for one year from effective warranty date (color picture tube — two years). Such replacement parts are warranted for the remaining portion of the original warranty period.

Warranty Service

Warranty service is provided in the institution in most cases. (Some repairs may require the unit to be taken by the servicer to the repair facility and returned, at no additional charge.) Call **1-888-865-3026** for further information.

Not Covered

This warranty covers manufacturing defects and does not cover installation, adjustment of customer controls, installation or repair of antenna systems, cable converters or cable company-supplied equipment; it also does not cover damage due to misuse, abuse, negligence, acts of God or other causes beyond the control of LG. Any alteration of the product after manufacture voids this warranty in its entirety.

THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND LG SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INDIRECT, OR INCIDENTAL DAMAGES OF ANY KIND, INCLUDING LOST REVENUES OR PROFITS IN CONNECTION WITH THIS PRODUCT. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

OWNER'S RESPONSIBILITY

Effective Warranty Date

Warranty begins on the date of installation of the Direct-View TV.
For your convenience, keep the dealer's dated bill of sale or delivery ticket as evidence of the purchase date.

Operating Guide

Read your Operating Guide carefully so that you will understand the operation of the TV and how to adjust the controls.

Antenna

Reception problems caused by inadequate antenna or faulty antenna connections are the owner's responsibility.

Warranty Service

For warranty service information, call 1-888-865-3026. Parts and service labor that are LG's responsibility (see above) will be provided without charge. Other service is at the owner's expense.
If you have any problem in obtaining satisfactory warranty service, call **1-888-865-3026.**
You must provide the model number, serial number and date of purchase or date of original installation.
Before you ask for warranty service, read "Maintenance and Troubleshooting" in the operating guide. You might avoid a service call.

For Customer Support/Service, please call:
1-888-865-3026
www.lgusa.com • www.zenith.com

LG Electronics U.S.A., Inc.
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